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USSR Report

CONSTRUCTION AND EQUIPMENT

No. 56

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CONSTRUCTION

LATEST PLENUM OF SCIENTIFIC-TECHNICAL SOCIETY OF CONSTRUCTION INDUSTRY MEETS

Moscow ZHILISHCHNOYE STROITEL'STVO in Russian No 6, Jun 81 (signed to press 11 Jun 81) pp 2-3

[Article: "The Plenum of the NTO of the Construction Industry"]

[Text] The 8th Plenum of the NTO [Scientific and Technical Society of the Construction Industry]convened in Moscow in March. Chairman of the Central Administration of the NTO of the Construction Industry, deputy chairman of USSR Gosstroy I. I. Ishchenko, delivered a report, "On Intensification of the Role of the Scientific and Technical Society of the Construction Industry in the Improvement of Construction, in Light of 26th CPSU Congress Decisions."

The reporter dwelt in detail on the tasks that face builders during the 11th Five-Year Plan. "The 26th CPSU Congress decisions," noted I. I. Ishchenko, "examine the tasks of intensifying and raising production effectiveness in continuous unity with scientific and technical progress. The party views acceleration of the pace of scientific and technical progress as one of the chief levers that will enable the complex of economic and social tasks that face the country to be solved."

The development of science and technology, as the "Main Directions for the Economic and Social Development of the USSR During 1981-1985 and During the Period up to 1990" noted, should be subordinated to a still greater extent during the 11th Five-Year Plan to solution of the most important problems of accelerating conversion of the economy to the road of intensive development and to a rise in social production effectiveness. Because of this, science--and construction science in particular--faces major tasks. A further acceleration of scientific research and rapid introduction of its results into construction work and a strengthening of the ties of science with production are to be provided for in every possible way. Under these circumstances, the role of the planning and management of scientific and technical progress is increasing as is the role of purposeful work on the development of scientic and technical problems and on the introduction of the results into construction work.

The experience of past years indicates that the greatest benefit is achieved in solving complicated problems on the basis of specific-program planning. The desirability of further development of the specific-program method of planning in solving the most important scientific and technical problems has been approved in the "Main Directions." During the 11th Five-Year Plan the specific-program method will be the basic method for planning the development of science and technology. During the current five-year plan it is planned to carry out in construction one specific integrated scientific and technical program and a number of programs on various most important individual scientific and technical problems.

The realization of a branchwide specific integrated scientific and technical program will enable new types of industrial, housing and social buildings and structures to be introduced widely into construction during this five-year plan, using structure with a high degree of readiness built-in at the factory and effective materials and structure. The final aim of the program is to reduce labor intensiveness in construction by 25 percent, materials intensiveness by 10 percent.

Among the 11 most important scientific and technical programs, five are dedicated to problems of improving the technical and technological solutions for certain special types of construction. One program calls for the development of a master scheme for the settlement of the country's land during the period up to the year 2000. Five of the others are aimed at further intensifying the study of such scientific and technical problems of the industry as the creation and introduction of new methods for establishing industrial clusters, new types of industrial, housing, social and agricultural facilities, new and improved automated systems for control, and progressive systems for the rational use of water for drinking and for industrial purposes.

The most important component of all the programs are the tasks that they specify for mastery of the production and the introduction of progressive equipment. Various social organizations and creative associations of workers, including scientific and technical societies, can make significant contributions in solving the tasks that have been set.

The most important tasks for all elements of our society now are to organize the creative participation of scientists, engineers, technicians and innovative production workers in the implementation of the program for further acceleration of scientific and technical progress that was adopted by the 26th Party Congress, in solving radical problems of improving equipment, and in intensifying construction operations. The main attention here should be paid to further development of the industrialization and integrated mechanization of construction, to improvement of technological processes, to betterment of organization and administration, and to making rational use of all types of resources.

During this five-year plan NTO organizations are to provide for still wider participation of all members in timely and good-quality fulfillment of program tasks, both for the development and for the effective use of the results thereof in design and construction practice. The statements of the "Main Directions" about improving design and budget-estimating matters have a direct relationship to the activity of our society.

Primary NTO organizations of design institutes, consultant-review organs and construction projects should actively see to it that designs call for the use of effective architectural-layout and constructional solutions and of highly productive equipment that will enable specific capital expenditures per unit of the production capacity created to be reduced. The creative competition of designers, the social discussion of designs in primary NTO organizations, the social consultant review of designs, the conduct of contests for the best designs, with the broad participation of the scientific and technical society, and other measures, will be of help here.

Our society can make an important contribution to and radically improve the organization of production and of labor. One of the main prerequisites for raising the organizational and technical level of construction consists in improvement of engineering preparations for construction operations. NTO organization support of the initiatives of advanced workers, including those that propagate the brigade cost-accounting method and that organize the work in contracting brigades, plays an important role in raising labor productivity at construction projects. The experience of some of the society's primary organizations in Moscow, Sverdlovskaya, Vologodskaya and Vinnitskaya oblasts and other organs testify to this. The scientific and technical society of the construction project should use such experience more widely.

The system of measures aimed at raising capital investment effectiveness includes realization of the program for restructuring the economic mechanism in construction. All construction activity will be converted to the new ways for management during the 11th Five-Year Plan. The 26th CPSU Congress decisions stimulated a new labor and political uplift in the country. The Soviet people, striving to convert completely into life the majestic plans contemplated by the Communist Party, are promoting socialist competition increasingly widely. Our scientific and technical society has many years of experience in participating in socialist competition on the basis of personal and collective creative plans. Testimony to that is the competition for a worthy greeting to the 26th Party Congress in which NTO organizations took part. The Brestskaya, Vologodskaya, Leningrad, Lipetskaya, Rostovskaya and Smolenskaya Oblast administrations and many other regional organizations of our scientific and technical society di much work on organizing the precongres competition.

The task today, using the experience gained, is to organize still more widely and in a businesslike manner socialist competition among members of the society for successful fulfillment of 26th CPSU Congress decisions, for an acceleration of scientific and technical progress in the area of capital construction, for the timely and full realization of scientific and technical programs, for raising the effectiveness of construction work, and for improving work quality.

The administrations and councils of the society's primary organizations must strengthen work on propaganda of the achievements of science and technology, as well as of advanced experience, in order to increase the knowledge and practical skills of engineers and technicians and innovative production workers. The society's institutes and universities of technical progress and economic knowledge, which hold seminars and schools of advanced experience, and meetings and conferences, should be used more completely for this purpose. All this work should be closely linked with the solution of urgent tasks of mastering new equipment and improving production.

It is necessary to develop in every possible way and to support actively the initiative of NTO organizations and members in finding reserves for reducing the materials intensiveness of construction and for raising effectiveness in the use of all types of resources. Questions of introducing progressive ways for organizing operations and for developing and executing integrated measures that will reduce manual labor concretely at each enterprise and each construction project should be the center of attention.

The report stressed, in conclusion, that all organizations and members of the Scientific and Technical Society for the Construction Industry should direct all their knowledge and energies toward successful fulfillment of 26th CPSU Congress decisions and the tasks of the 11th Five-Year Plan.

Taking part in discussion of the report were Chairman of the Belorussian Republic's NTO Administration S. S. Atayev, who dwelt on questions of creating a republic integrated specific-purpose program in the area of construction and of NTO participation in its preparation, and VNIPI [All-Union Scientific-Research and Design Institute] for Labor In Construction director I. A. Sukhachev, who described the measures that are being taken during this five-year plan to reduce manual labor at construction projects by introducing mechanization and automation, by improving the technology of the work, and by industrializing construction. Chairman of the Construction Economics Section of NTO's TsP [Central Administration] A. I. Mitrofanov dedicated his remarks to shifting the conduct of the national economy, including construction, toward the intensive path, and to realization of the CPSU Central Committee and USSR Council of Ministers decree about improving the economic mechanism.

Honorary VSNTO [All-Union NTO Council] member N. K. Proskuryakov told in his remarks about problems of raising the effectiveness of prefabricated reinforced-concrete structure. Deputy Chairman of the Tyumenskaya Oblast NTO Administration N. A. Khabidullin told about the introduction of integrated specific programs at Glavtyumenstroy [Main Administration for Construction in Tyumenskaya Oblast] construction projects. Chairman of the Council of Primary NTO Organizations of KievZNIIEP [Kiev Zonal Scientific-Research and Design Institute for Standard and Experimental Design] V. S. Volga dwelt in her remarks on the effectiveness of use of combined reinforcement (using fiberglass) in the manufacture of constructional parts and structure, which yields substantial savings of metal.

Deputy Chairman of the Vladimirskaya Oblast NTO Administration A. M. Stepanov shared the society's work experience in introducing brigade cost accounting and in using frame-and-panel structure and apartment-box modules for housing at Vladimirskaya Oblast construction projects. Deputy Chairman of the Murmanskaya Oblast NTO Administration B. A. Drozhanikov told about his administration's work to raise construction quality and to introduce the contract form for organizing work and to reduce manual labor at construction projects.

Deputy VSNTO Chairman Yu. M. Tsugulev dwelt in his speech on the tasks of the scientific and technical society for builders during the 11th Five-Year Plan, including questions of determining the final results of specific programs, of raising labor productivity, of increasing the creative activeness of NTO members, and of involving advanced production workers in active creative work.

The plenum adopted in its report a detailed resolution aimed at speeding up scientific and technical progress and intensifying production in construction.

The scientific secretary of the TsP of the NTO of the Construction Industry, K. V. Paremskiy, reported to the plenum information about the work of the Presidium of the Central Administration of the NTO of the Construction Industry.

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BACKGROUND ON INFLATED REPORTS OF ACCOMPLISHMENTS DISCUSSED

Specific Case Reported

Moscow KOMSOMOLSKAYA PRAVDA in Russian 2 Jun 81 p 2

[Article by Yu. Lepskiy (Omskaya Oblast): "An Inflated Report"]

[Text] Vladimir Aleksandrovich Goryachev, chief of Mobile Mechanized Column No 3 took out his fountain pen and signed some papers. The documents, which were sent to a Gosbank division, said that 90 meters of wall had been erected at a job. Goryachev had just returned from the "job" and knew with confidence that the calf pen that his PMK [mobile mechanized column] was erecting on the outskirts of Krutinka settlement had no walls at all, and the slab for it had not arrived.

Ninety meters of wall--that is 10,000 rubles. The uncomplicated financial operation that the PMK-3 chief committed meant nothing else but an inflated report, which is subject to Article 152 of the RSFSR Criminal Code.

The case of the inflated report did not go unnoticed by the financial organs. A report made out by senior inspector L. I. Sazonova about a false report on control figures came to the Omskaya Oblast Gosbank Office: "Walls of the calf pen--budget-estimated cost 32,407 rubles. Work reported done--10,000 rubles' worth. Work not done--10,000 rubles' worth."

Gorbachev was quickly and severely punished. But the money for the work not done had already been obtained. The major portion of it had been spent on pay for the construction workers that had not actually been earned.

This case is not at all isolated. According to data of the Omskaya Oblast Gosbank Office, one administration alone of Omsktselinstroy [Trust for the Construction of Virgin-Lands Facilities in Omskaya Oblast] had overstated construction and installing work by 908,000 rubles' worth for 3 quarters of 1980. The rural residents--students, consumer-cooperative workers, animal husbandrymen and vegetable raisers--had counted in vain on well-lighted classrooms, nice stores, hothouses for raising vegetables, and new and spacious calf pens and cow barns. They were simply misled. So was the state.

The oldest staff worker of the oblast's Gosbank Office, Great Patriotic War veteran Vladimir Aleksandrovich Zavgorodnyy, wrote to the editorial board about this with pain and civic anger.

Krutnika is a small settlement--everyone knows everyone else by sight. PMK-3 is the only construction organization in the settlement. No few things have been built at Krutnika recently, by the way: a Palace of Culture, a hospital, a cinema, a House of the Soviets, a kindergarten, a hotel and eight two-story apartment houses. PMK-3 chief Vladimir Aleksandrovich Goryachev had a most direct relationship to each of these facilities. He visited the construction projects, beat out the materials and cursed the suppliers. But the job moved ahead, housing rose, and, although it was not always on time, it nevertheless was turned over for use.

Why did an experienced supervisor consciously violate the law?

The results of sociological surveys conducted among supervisors of construction subunits indicate that only 6.9 percent of those surveyed explain inflated reports by deficiencies in monitoring or by the profit motives of those who inflate reports.

We talked with Goryachev more than once about his construction affairs. And once I asked: "Vladimir Aleksandrovich, was it really necessary to fake? Let's imagine that in the case of the calf pen you acted honorably and on the basis of principles, and did not inflate the report but let the documentation show straightly and accurately the amounts of unfulfilled work...." Goryachev thought about it and this is what came out.

The first problem that the PMK-3 chief would encounter in the assumed circumstances would be a lack of money for paying the workers' wages. It is clear that the brigade that was building the calf pen was not guilty for the suppliers' lack of efficiency. But in order to pay them for this forced idle time, Goryachev would have to appeal to the trust management in writing; the trust's management would transmit his request to the Omsktselinstroy Administration, and the administration would send a telegram to the ministry asking for authorization to take money from an account at the bank. And only after an answer from the ministry would Goryachev be authorized to get money at the bank and pay the calf-pen builders' wages.

Bothersome? Well, whatever you do, do it honestly. But, as it turned out, that was only the start. "Now," Goryachev bends his fingers, "the ministry, the administration and the trust know that I have permitted an overexpenditure of pay. And for a year, there will be talk at meetings and sessions about how bad Goryachev is, and about his not being a skillful supervisor. All right, I will put up with it. But well--the next month, if they do not deliver the slab? Again write a petition to the trust? No, spare me. It is better to claim something I did not do. There is less confusion."

Is it not true that the PMK chief's situation appears to be a strange one? He has less confusion when he at times breaks the law, but if you go according to the law you do not protect yourself against trouble. Why? I put this question to many economists and supervisors in Omsksel'stroy-2 Trust [Omskaya Oblast Rural Construction Trust No 2], the organization that is the superior of the PMK at Krutinka. Deputy Manager of the trust, Vladimir Nikolayevich Salov, answers this way: "You will recall, of course, the inflated report should be disadvantageous, then they will begin to avoid it, just as they avoid overexpenditure of the wage fund."

That's the whole point. An overstatement should be economically disadvantageous within the economic mechanism of the construction project itself. That situation does not exist yet. If Goryachev did not claim the nonexistent calf pen, the client would be the first to collapse on him: the capital investment for the current month would be lost. Where will he get it in the future? It is more advantageous for the client that Goryachev builds on paper than not build at all. The inflated report is convenient also for the trust's management. For the trust it is preferable to search out additional possibilities for urgent shipment of scarce materials to the PMK than to get scoldings from the administration and the ministry for overexpenditure of the wage fund. They will close their eyes to the first, but the second is punishable.

Whichever way Goryachev goes, he will find himself between the client, who did not express opposition to inflated reports, and the supervisor, who silently encourages them. The question is, clearly, for the PMK chief, rhetorical.

It will be appropriate to state here that, in accordance with pressing requirements of Omsk's Gosbank Office, the trust issued an order releasing Goryachev from his post, for making an inflated report. However, this order, like the fake document that Vladimir Aleksandrovich once signed, had the purpose of "soothing" the financing organs.

The trust considers Goryachev a young supervisor. In 1967 he completed the School for Industrial and Nonindustrial Construction of the Omsk Road Institute. He was a superintendent, a section engineer, and 4 years later became chief of the Krutinka PMK. He was there when the main construction jobs in the village were the cow barn and the calf pen. At that time, according to Goryachev's statement, the rural builders were in clover. "The cow barn consists of four types of parts. For the supplier to manufacture them is as easy as falling off a log. And we had no interruptions of any kind with supply. There was no one to deceive, no reason to write inflated reports."

Today the situation in Krutinka and nearby villages has changed sharply. It is not only and not so much the cow barns that have to be built as schools, household-services buildings, kindergartens, nurseries and palaces of culture. The Siberian village has been getting up in the world. And today the suppliers for the Krutinka PMK are manufacturing 200 types of parts. In a short time the variety of reinforced-concrete articles has grown 50-fold. The difficulties in their timely and regular delivery have risen correspondingly. And the Krutinka PMI has become feverish.

Perhaps the fever struck Goryachev most of all. The young engineer, who once dreamed, when he was at the institute, of building his own "white-walled city," gradually began to understand: the white-walled city is nice, of course, but it is complicated. In his idealized conceptions, in no way did there appear the words, "to beat out," "to fetch," and, of course, to "inflate reports," which ever more frequently can be glimpsed in builders' vocabularies. At first Goryachev resisted all this, but only until the first serious dressing down in the trust's administration. Then everything became simpler and more prosaic: "chance" table talk with the necessary people--the suppliers--became a regular thing. Ever more rarely did subordinate chiefs of the PMK and fellow villagers encountered a sober gaze of Goryachev. The first overinflated report proved easy for Vladimir Aleksandrovich, and, unfortunately, it was not noticed by the financial organs.

Today PMK-3 is to build simultaneously 21 facilities--with 100 workers. Goryachev had an average of 5 workers for each facility. But the suppliers let him down. And management is in a hurry. And the bank requires an accounting. And then the PMK chief sits down at his writing table and gets out his fountain pen....

Does it turn out that the inflated report rescues Goryachev? Not likely. Torments that are invisible to an outsider are only beginning here. Because of the inflated report, the actual walls of the calf pen still are not rising up. But since the concrete slabs nevertheless have been laid down on paper, then the next shipment of them will be earmarked for the next facility. Goryachev is forced to fill the breach, stripping another facility now. And so on, ad infinitum.

Behind all this is the type of supervisor who is "entangled and shaken up" in the search for detours in the economy. Need it be proved that such a work style is unacceptable? The 26th CPSU Congress pointed directly to the growing importance of personal responsibility of the economic supervisor--responsibility to the people who have trusted him to supervise, and to the party and the people. In so doing, it was noted that nationwide interests should always be placed higher than the interests of the individual enterprise.

PMK-3 brigade leader Ivan Petrovich Shel'maker and I figured that in 3 quarters of 1980 his brigade had worked only 5 months, that is, almost half of the builders' worktime had passed in idleness. What kind of work discipline is this? I wanted to know: with whom is the brigade competing? Ivan Petrovich laughs: "What's the matter with you, what kind of competition? There is one competition here--wherever more can be earned."

I ask Goryachev: "May I take a look at the brigade's socialist commitments?" "But we did not adopt any." "Well, how about personal commitments?" Neither had they been adopted. Goryachev answered this way: "If they take on personal commitments, I certainly will begin to move them from job to job."

PMK-3 has a multitude of problems. One of them is a lack of skilled installers. At least 25 people are badly needed. First Secretary of the Krutinskiy Rayon Komsomol Committee Laris Antilogov spreads his hands: "We tried to send youth to construction--school graduates did not want to go. This year we barely talked nine people into entering a construction tekhnikum."

And it seems to me that it is not by chance that former students are in no hurry to go to this construction project. Krutinka is a small settlement. Everybody sees everything. This is another side of the overstated report.

How do you deal with this? Not just Goryachev should answer this question.

Sociologist Discusses Contributing Factors

Moscow KOMSOMOLSKAYA PRAVDA in Russian 8 Sep 81 p 2

[Article by Corresponding Member of the USSR Academy of Sciences T. I. Zaslavskaya, manager of the Sociology Division of the Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences: "An Inflated Report and a Formal Reply"]

> [Text] What is to be done about the numerous inflated reports in construction? How does one deal with this harmful phenomenon in the economy, which causes serious harm also to the moral

climate in working collectives? These questions were raised in KOMSOMOLSKAYA PRAVDA in the correspondent's report, "An Inflated Report," which was published 2 June 1981.

Readers responded to the article. Answers came to the editorial board from Omsksel'stroy-2 [Omskaya Oblast Trust for Rural Construction No 2], in one of whose subunits Engineer V. A. Goryachev--who was mentioned in the correspondent's report--worked.

Trust manager A. R. Timoshenko and party-organization secretary G. N. Salov reported: "The facts set forth in the article, 'An Inflated Report,' actually took place. This became possible as a result of a violation of state discipline of PMK-3 chief Comrade Goryachev, V. A., and a lack of monitoring on the part of the trust's staff. The article was discussed at a staff meeting of the trust. An order, 'On the Conduct of Monitoring of False Reports About the Amount of Work Actually Done in All Subunits,' was issued. Comrade Goryachev, V. A., was relieved from duty as PMK chief for gross violation of state discipline by inflating a report."

Pardon us, but the fact that the PMK supervisor had been punished was already reported in the correspondent's story, "An Inflated Report." The supervisors of the trust "forgot" to report to the editorial board that even after "the adoption of measures," Omsksel'stroy-2 had overstated nonexisting amounts of construction in the amount of 62,300 rubles (data from the Omskaya Oblast USSR Gosbank Office).

It turns out that the "measures" taken in the trust were still just a screen with which they tried to cover up more reliably the persistent inflated reporting.

We asked the manager of the Sociology Division of the Institute of Economics and Organization of Industrial Production of the Siberian Division of the USSR Academy of Sciences and Corresponding Member of the USSR Academy of Sciences, T. I. Zaslavskaya, to comment on the questions raised in the body of "An Inflated Report."

Let us not forget that an inflated report is a direct violation of the law. And people who resort to this are violators of established norms and deserve punishment. This also was mentioned in the correspondent's report, "An Inflated Report." But I would also like to pay attention to another aspect of the matter. What does the incident say about PMK-3? Primarily that the supplying of materials and equipment for rural building organizations has been organized very badly. Even the best of the brigades sat idly for 4 months out of 9. And what occurs in the worst cases? In 1980 we surveyed the managers of 50 Siberian kolkhozes and sovkhozes. To the question of whether they were satisfied with construction at their farms, all of them answered negatively. Of the causes that prevented construction project development, in first and second places were the supplying of materials and equipment and a lack of capacity on the part of construction organizations. In third place was a workforce shortage. As we see, the situation described in the article is more than typical.

The suppliers' extremely uneven, incomplete and poor-quality fulfillment of their obligations in regard to the builders is also explained in no small degree by disturbances in the workings of the economic mechanism. For the low work indicators of the PMK did not affect assessment of the supplying plants' activity. What is more, since this is the case, neither the sovkhoz for which the calf pen was built nor the PMK which undertook the contract had at its disposal a real means for punishing the suppliers.

Another peculiarity of the situation is that the PMK's construction work program is not coordinated with the resources allocated. The plans for supplying materials and equipment to construction organizations are based upon the consumption-norm estimates per 1 million rubles' worth of construction and installing work. Meanwhile, the real "stuffing" for each million depends upon what kind of a facility is being erected, the basis for the design, the technology that is being applied, and so on. It is natural that many materials will not come up to the plan level.

A third peculiarity of the situation: the PMK chief under all conditions should pay his workers' wages. If he does not do so, he will remain at the construction site alone. Where supply is extremely irregular, he should have, it would seem, legal recourse for making adjustments, at least through relatively easy acquisition of short-term credits at the bank. Actually, this path is closed to him. In the best case, he can use credit once.

Putting one's self in Goryachev's position, we see, as did the correspondent, that in this case the PMK chief had only two paths before him. One of them was linked with violation of the law. The other was within the law but would end up, as experience indicates, almost inevitably with removal from the job. As for the fact that Goryachev took the first route, he is not alone, as the figures that have been cited in that same article testify. Indisputably, Goryachev is guilty, but is he alone? And is it correct to place the whole measure of responsibility upon an individual for what is, in essence, a practice of which the trust's organizational work is guilty?

Unfortunately, in the course of time, illegal activity in rural construction, as in certain other branches, is expanding. And it is not because people are becoming worse. But because the economic mechanism does not keep up with the change in production forces and lags behind production requirements. And, as a result, certain enterprise supervisors take the path of so-called "shady" economic activity. In so doing, they proceed apparently from the best of motives. They want to fulfill and overfulfill the plan, to introduce apartment houses into operation more quickly, to ship high-quality materials, and to provide for high and regular pay of workers. But even a short-term transition from the "basic" economy to the shady economy does not occur without any trace for society.

According to V. I. Lenin's well-known statement, socialism is accounting Having learned this statement practically since childhood, we do not always realize how correct it is: for without a precise accounting and correlation of expenses incurred with the products obtained, the planned management of production is impossible. Meanwhile, both a failure to allow for expenditures and a deliberate overstatement or understatement of results has become widely disseminated in modern economic practice. The question of whether to overstate or understate is determined sometimes by group interests. It is no secret that a portion of the young animals that are born on farms are not picked up on the books of kolkhozes and sovkhozes but are at once earmarked for barter. For example, they are exchanged for a deficit with lumber mills, coal mines and cement plants....Or here is still another situation: expenditures for the harvesting of agricultural products by workers of city enterprises are considered only in a small degree in the prime cost of this output. The main portion of the cost is imposed on the outlays of enterprises and institutes in the city. Such a situation is not at all inoffensive.

Shady economic activity has still another form, which KOMSOMOLSKAYA PRAVDA noted. At first an inflated report is made with favorable intent but when it has become customary, then it often begins to serve as a means for raising one's income. And there you will also see scarce materials being used for the construction of the director's personal housing. And the workers also carry home everything that comes into their hands. It is not for nothing that the Russian proverb says: "The talons get stuck into everything that comes the bird's way."

Enterprise supervisors are the economic plenipotentiaries of our society. As a rule, they comprise the most capable, energetic, initiative-filled and widely knowledgeable segment of the workers. Why should they even rarely work under conditions that objectively nudge them in the direction of a violation of legality? For is it impossible to regulate the economic mechanism with a design under which the manager of an enterprise and every ordinary worker will find it advantageous to operate precisely as the interests of society require?

Two years have passed since the CPSU Central Committee and the USSR Council of Ministers adopted the decree about improving the economic mechanism. Measures must be taken that will bar the words "shady economics" from the economists' lexicon. This is in the interests of the country and, that means, in the interests of all.

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CONSTRUCTION

OVERDUE CONSTRUCTION PROJECTS DISCUSSED

Moscow EKONOMICHESKAYA GAZETA in Russian No 22, May 81 p 9

[Article by R. Khanbalinov, deputy manager and chief engineer of the oblast office of USSR Stroybank (Alma-Ata): "In Order to Make Overdue Construction Jobs Disappear"]

[Text] For more than 10 years now, Alma-Atapromstroy [Alma-Ata Industrial Construction Trust] has been building a new complex for the municipal-services combine. And, for almost as long, Alma-Atakul'tbytstroy [Alma-Ata Trust for the Construction of Facilities for Cultural and Personal-Services Purposes] has been building a Palace of Culture for textile workers and an educational building for a pedagogical institute. And we are referring here to organizations that are strong and have a solid base.

And in both cases, as analysis shows, capital investment was allocated and construction and installing work volume was planned without regard to the construction-time norms. From year to year these "antique" projects have wandered-- from one contracting organization's construction schedule to another, and changes in the introduction deadlines "for objective reasons" have completely accommodated the builders.

Well-known decisions of the party and government about improving the economic mechanism have decreed an end to this vicious practice. The set of measures being implemented will help to solve many problems.

Extremely effective here has been the conversion to settlements for, in the case of design organizations, design work that has been completely finished and accepted by the clients, and, in the case of construction organizations, enterprises and start-up complexes, phases and facilities that have been completed and turned over for operation. In these cases, a finished design is counted as a final result, as is the introduction of fixed capital and construction capacity by the established deadline.

The Client's Duty

The new procedure makes its demands on all participants in construction operations--client, designer and contractor. Some tasks, in our view, should be considered first priority.

The client, for example, should thoroughly examine the makeup of expenditures for design and surveying work, which is carried on the books as uncompleted construction. The most promising designs must be picked out from previously developed ones, in order to reduce sharply the number of newly prepared documents. In so doing, it is important to consider the actual potential for capital-investment allocation and existing contracting-organization capacity.

It is especially important to undertake such steps because the republic's ministries and agencies have accumulated finished design and budget-estimating documentation for more than 1,000 facilities, and yet more than 100 construction projects still have not excavated the first scoop of soil and the designs and budget estimates for dozens of facilities are so old that there is nothing to do but write them off.

Thus, at the start of this year, documentation for 108 facilities whose budget-estimated costs were 46 million rubles were lying on the shelves of the Kazakh SSR Ministry of Consumer Services. The design and survey work for them alone exceeded 1 million rubles. Let us add that 10 of the designs which had been procured, as they say, for a reserve have become obsolete. A similar picture can be seen in the republic's Ministry of Highways and Ministry of Municipal Services.

Under the new terms for management, such an "accumulation," which leads to wasted expenditures, is intolerable.

Reserves for Design Work

Improvement of the economic mechanism also presents increased demands on design institutes. Beginning this year, the expenditures of these organizations (prior to the planned deadline for turnover of the designs) will be covered through in-house working capital, and also bank credit. For this purpose, monetary sums are being used that clients have released because of the conversion to settlements without intermediate payments. When the plan deadline for turnover of designs expires, credit-granting continues, but in this case increased interest will be charged for the loans.

It is obvious that the role of Stroybank institutes grows in this matter. We are ready for this. In 1977-1980 Stroybank's Alma-Atinskaya Oblast office conducted an experiment, jointly with Kazgipropishcheprom [Kazakh Branch of the State Institute for the Design of Food-Industry Enterprises] and Kazgorstroyproyekt [Kazakh Branch of the State Design Institute for Urban Construction], on long-term granting of credits. Settlements with these organizations were made for completely finished surveying operations by design stage, and also for one-stage design, where design work takes less than 8 months, and for two-stage design, where construction time was less than 1 year.

The advantage proved to be mutual. Stroybank was able to perfect the new system and it gained definite experience. The designers provided a uniform workload for their sections, issued the required documentation to the client in good time, and improved their financing and economic activity. And, what is especially valuable, it was possible in some cases to prevent wasted expenditures.

Kazgipropishcheprom worked out a feasibility study for the construction of a macaroni plant at Chimkent ahead of schedule. The time won exceeded 3 months. The TEO [feasibility study] received an excellent response from the client. The blueprint for the construction of a department for nonalcoholic beverages in Alma-Ata was issued 90 days ahead of schedule. And so it was also with other designs that fell within the sphere of the experiment.

The bank credit and the interest rates used in this case, which affect the design organizations and clients economically, are helping to reduce the time required for developing and approving design and budget-estimating documentation. Today the experiment has become practice. It would seem that the example of Kazgipropishcheprom and Kazgorstroyproyekt will be of good help to other design organizations.

The New Form of Settlements with Contractors

We have gained definite experience in settlements between clients and contractors for facilities of enterprises, startup complexes or phases that have been completely finished and turned over. The level thereof at the start of this year was about 70 percent of the total payment for construction and installing work that was done through Stroybank institutions. For facilities for housing and municipal purposes the share is higher--more than 85 percent, while for construction projects for production purposes it is about half. Thus it is that there are still significant reserves.

The Alma-Ata DSK [Housing Construction Combine] is making settlements with the client only for finished output. The enterprise has its own working capital for expenditures on uncompleted output. This comes to 11 million rubles--a fifth of the annual program. Bank credit, which the combine is using confidently and successfully, also is a constant source for the combine's turnover.

The new type of settlements has enabled the DSK collective to bring no few reserves for labor productivity growth into action. As a result, construction time for erecting facilities has been reduced, and the economic benefit of the collective's activity has grown. Thus, 8.2 million rubles of profit was obtained at the enterprise last year versus the plan for 7.3 million.

The collective of Sredazenergostroy [Central Asian Trust for the Construction of Power-Engineering Facilities] converted to the new type of settlements in 1980. I will note that this organization is erecting such large objects as heat and electric power centrals in Alma-Ata, Karaganda and Chimkent. Therefore, our Stroybank office has paid special attention to this step of the collective.

According to our calculations, USSR Stroybank has established for Sredazenergostroy Trust the required average annual ceiling on the granting of credits. From our point of view, the power builders have received all the help required. But they themselves should have the final say. And they have had it. The first phase of the Alma-Atinskaya TETs was put into operation by the prescribed deadline.

It is difficult to overestimate the value of such experimental checks. We are now making preparations on a firm procedural basis for the large-scale conversion of construction organizations, as well as of design institutes, to the progressive type of mutual settlements.

This Remains to Be Solved

Experience indicates that determination of the construction commodity output for facilities that are under construction do not provoke special complexities in most cases. It is different with separate phases and startup complexes for enterprises and structures. Determining construction commodity output for them is fraught with great difficulties, and an inadequate degree of authenticity is frequently noted.

The cause lies in the fact that the client determines the makeup of the startup complex, as a rule, in the year that it is to be put into operation. The amount of capital investment allocated to the client or the agreed amount of contracting work becomes the main criterion in this case. Such a situation leads in practice to work that is carried out at construction projects which make up the startup complex often not being accepted for operation by the state commission, or, after having been accepted, not being in a condition to provide for the normal output of the industrial product or to extend the service required.

Moreover, the client's determination of the makeup of a startup complex in the year planned for its introduction does not promote high-quality development of five-year plans for construction.

It is desirable that a precise procedure for developing and approving startup complexes be established, not only for newly started construction projects but also for previously issued designs. The lack in the design and budget-estimating documentation of approved startup complexes should be assessed as an incompleteness of the documentation and should be the basis for noninclusion of the construction project in the plans, and also for use of the appropriate penalties against the design organization.

Providing for a correct ratio of the amounts of construction commodity output and of uncompleted construction work is of great importance under the new conditions. As is known, a backlog of started work that will enable maximum commodity output to be obtained steadily is necessary in order to provide for the rhythmic work of construction organizations. The development here of a standard practice for planning uncompleted-work volume for contracting organizations is required.

All participants in the construction process are awaiting USSR Gosplan and USSR Gosstroy solutions to these questions. We are confident that successful realization of measures for improving the economic mechanism will enable capital investment to be sharply raised during the 11th Five-Year Plan.

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INDUSTRIAL CONSTRUCTION CHIEF ASTRASHEVSKIY INTERVIEWED

New Technology Development Fund

Moscow STROITEL'NAYA GAZETA in Russian 5 Jun 81 p 2

[Interview with Belorussian Ministry of Industrial Construction technical administration chief V. Astrashevskiy by P. Burak in Minsk: "Unified Fund"]

[Text] Before presenting the conversation with Belorussian Ministry of Industrial Construction technical administration chief V. Astrashevskiy, we cannot avoid a somewhat long, but necessary, introduction.

We are faced in the 11th Five-Year Plan with introducing a complex of measures to improve the economic mechanism. They are put forth in the famous party and government decree of 12 July 1979. Many provisions of this document have been experimentally verified in the BSSR Ministry of Industrial Construction, including that on forming and using a unified science and technology development fund. Let us recall it: "Create in the ministries and departments a unified fund for developing science and technology to finance scientific research, experimental design and technological work and recompense expenditures associated with working out and utilizing new types of output and technological processes, with introducing scientific labor organization, and also to finance additional expenditures on improving product quality and higher expenditures in the initial years of production of new output."

Those facing this job are certainly interested in both the experience of their Belorussian colleagues and in the lessons they have derived from it. This will help us do less stumbling over the many acute angles of the new path. So we approach the topic of discussion. First question.

[Question] Viktor Petrovich, was branch science in fact not being developed before this, was not money in fact available for this before, and was the needed fund not in fact being created previously, including in the republic ministries? And the principle for creating it has been and is to use a certain percentage of the volume of construction-installation work done....

[Answer] But before, 50 percent of that fund was taken by the union ministry. And in order to get it back, it was necessary to again go to it with a topic and demonstrate what innovations we wanted to work out and introduce and request additional financing. And before giving us the money, it again revised our plans and calculations, and so on.

[Question] But the second half of the fund remained with you?

[Answer] And in using the remaining 50 percent, we were bound to pay basically for work done on USSR Gosstroy and State Committee for Labor and Social Questions topics.

[Question] And now?

[Answer] Now, such topics, which benefit all builders in the country, are not included in payment from the unified scientific and technical development fund, but are financed through the state budget, just as are research and development done under the USSR Ministry of Industrial Construction plan. Our hands have now been untied in using the unified fund, which is considerable. Up to 0.6 percent of the annual contractor work volume can be deducted to it from the balance profit of trusts and other subdivisions subordinate to the ministry. Currently, for example, a normative of 0.43 percent has been approved, not very high and far from the "ceiling," but still, it is providing nearly 3.5 million rubles for developing science and technology, which our republic ministry is free to dispose of at its discretion. And that is consonant with the times, which demand that science be brought closer to the essential needs of the construction project.

[Question] You said, "...can dispose of at its discretion." What is your discretion, or more precisely your opinion, governed by?

[Answer] First of all, by economic interests. The technique for distributing the fund is this: we divide it by all the subdivisions, right down to the trusts, but not by mechanically "scattering" it. Initially, we ask subordinate organizations and enterprises for their suggestions, which we filter. Then we draw up a scientific research plan and, in addition, a list of measures which could be paid for from the unified fund. There is a line in the plan that the trust can boldly take up the development of a topic and enlist outside help, but in that case, it must submit to us documents confirming that the research has been done or the innovation introduced, and the ministry pays for the work.

This is the external side of the matter. But the essence is what topic to choose and who to choose to do it. And it is at this point that economic interest moves us. The unified fund was in fact born of an economic experiment conducted in the BSSR Ministry of Industrial Construction. How was it before? If the year ended with a loss, the loss was written off, and new circulating capital was provided for the following year.

If we ended up in the red again, again it was covered for us. Now, the ministry operates on a fully self-financed basis, taking out bank loans which it must repay. And in order to repay them and have something left for itself, we need to operate at a profit.

We now consider exactly what we will make money on and what we will lose money on. Before, when working with some institute laboratory which did not achieve any practical results, we told ourselves, "Well, o.k., that happens. This is science, a capricious business, and even a negative result will bring some good or other." But we weren't particularly alarmed that the bricklayer didn't benefit from it. We now think differently. Now that my wages, too, depend on how these monies are used, I look to see which of the scientists will provide a real return, and that's the one with whom I work. Otherwise, they say to me and to the technical administration: "You took this much for your fund and the result was less, so you're living off the branch." In order not to hear such offensive words, we choose the most effective innovations for development and introduction.

We spend at least half a million rubles annually on scientific research, enabling us to solve a number of important problems. In cooperation with scientists at Belorussian Polytechnical Institute, we created centrifuge towers which have been used to build two dozen projects. The "wall-in-ground" method was also mastered in this republic through this fund. Some 40,000 rubles was spent and 270,000 has been received. Effective, no matter what you say. Some 150,000 to 200,000 rubles a year goes to resolving tasks using ASU [automated control systems]. Such large tasks as, say, determining material resources in terms of physical volume have been resolved as a result.

Fund monies are used actively in capital construction itself. For example, 52,500 rubles was spent on setting up model-demonstration construction by the Gomsel'mash -- a most up-to-date work production plan was made by improving several resolutions, in particular, those on the foundations and using progressive piles, and leading work methods were introduced. The return has been about 90,000 rubles. We quite recently developed new components for 900- to 1,200-mm heat pipes, mastered the technology for installing them and ran a commercial-pilot test in trust No 15. They are now being prefabricated.

[Question] However, introducing something new does not itself produce results. Along with money, you need additional expenditures of both mental energy and personal time, which is not to everyone's taste. Logically, those who seek out and risk should have advantages over those who stand on the sidelines and temporize.

[Answer] Unfortunately, there are unsolved problems here. The Brest No 8 trust decided to introduce an effective, economical "dynacore"-type channel span when building the Kobrinskiy Spinning and Weaving Factory. What efforts it took! They first had to order development of the innovation at the scientific research institute, then sought out the assistance of the Reinforced Concrete Institute in learning how to make it, then drew up the specifications (a real job), then draw up plans for loading onto motor and rail transport, then develop an assembly line to produce the new span.... All this took 1.3 million rubles from the fund.

But then, the return was worth it. Compare the Korbinskiy factory with another, the Slonimskiy Worsted Spinning Mill, in whose construction traditional resolutions with a suspended floor were used. Although the production space of the main structure at Kobrin was nearly twice that of the Slonim mill, the estimated cost of the construction-installation work was only 15 percent higher, and the cost of materials per square meter of space was a third less. Nothing surprising in this, it was a good innovation. What is surprising is that the pathfinding trust, after shouldering this burden and saving the state about eight million rubles by introducing this innovation at just one project, itself was the loser.

It is quite fair to demand, I think, that the economic impact obtained be somehow reflected in its activity.

[Question] How?

[Answer] It would be appropriate to consider the total reduction in cost of a project when determining output for plan fulfillment. Otherwise, the productivity of the pathfinder would seem to drop and that of those working traditionally, without seeking out innovations, would look higher, on paper. This adjustment could be made before the innovation goes into series production, in a couple of years. Such an approach would enable us to more realistically reflect additional efforts on introduction.

It would not hurt to set aside a certain percentage of the millions saved for the pathfinder, to develop the base. If you prove to the Gosplan an actual, practical economic return, you get something for yourself.

I'll go even further: it would be good if the unified fund monies were partially materialized. What does that mean? The trust introduces a new facility. In order to install it, we need both a motor, which can be bought through the fund, and cement, other materials and energy. And where are they going to be gotten if not through the science and technology development fund allocations? One must scurry about. For that reason, not everyone tries to introduce innovations, even for the bonuses, the idea being at least not to go looking for trouble. You can't get around some calls, like to "be fans of technical progress." The outcome is a continued strengthening of economic levers. As is known, the first inherits the most. And we need to create conditions such that the first inherits the most buns, as well as the most bumps.

BSSR Industrial-Center Construction

Minsk SOVETSKAYA BELORUSSIYA in Russian 19 Jul 81 p 3

[Article by V. Perzashkevich: "Experience Approved: Notes from the All-Union Scientific-Practical Conference 'Increasing the Effectiveness of Siting and Building Enterprises As Part of Industrial Centers' (on the Belorussian SSR experiment)"]

[Text] Two decades ago, our republic was one of the first in the country to begin extensive introduction of cooperative construction of enterprises as part of a unified industrial center. The new form of construction, approved by the Belorussian Communist Party Central Committee and BSSR Council of Ministers, was widely and quickly disseminated. And now practically all enterprises being built or already in operation here in this republic are part of territorial industrial complexes. The only exceptions are ones which cannot be in such complexes due to their production specifics or those which must be located directly in housing regions.

The reference, of course, is not to a simple mechanical moving of one enterprise closer to another, to an adjacent site that just happens to be vacant. The point of an association of this type is much more profound. It first of all anticipates the erection of transport, water-management and power facilities, access roads and utilities not for each enterprise individually, but for all at the same time. And here is the form it has taken: construction of 48 industrial centers consisting of 3-8 enterprises each has now been completed or is underway in the republic. Of these, 44 are already producing output. The savings in capital investments in such facilities has been 200 million rubles. Sites for all these complexes required 560 ha less land than had each enterprise been built separately.

Moreover, if several enterprises of one branch are concentrated in one industrial center, in Pinsk, for example, an opportunity appears for cooperating in the joint use of auxiliary production common to all the enterprises there: repair services, tool service, heat-treating service, galvanizing service, and so forth. This provides an opportunity for reducing production space by 650 m^2, reducing the amount of equipment by 400 units and the number of workers by 374 people. In sum, another two million rubles in capital investment savings and a reduction of 600,000 rubles in operating expenses.

Considerably more than half the industrial centers built and planned in the republic have been sited in small and medium-sized cities: Brest, Pinsk, Borisov, Molodechno, Zhodino, Osipovichy, Mozyr and several others, naturally with consideration of their geographic conditions, transport ties and availability of power, mineral raw material and labor resources. The disproportion in the use of men's and women's labor noted in these cities is to be eliminated as well. Let's say Pinsk had just one large enterprise before this, a knit outerwear combine employing mainly women. But now a whole complex of plants for machinebuilding industry has appeared and uses predominantly men. Let's add that the creation of industrial centers also ensures a balance between skilled and unskilled, mental and physical labor, that is, it provides broad opportunities for workers to improve their occupational skills.

Consideration must also be given to the fact that the complexes of industrial enterprises are included in the city layout structure and consequently have a very substantial influence on their architectural and artistic appearance. It becomes possible, on the basis of an efficient distribution of enterprises, housing, cultural and personal-services projects, to comprehensively build up and shape the architecture of sites, main roads and entire regions. This is especially graphically evident in the example of such cities as Borisov, Grodno and Brest.

And there are the problems of protecting the environment, using recovered resources and saving raw and other materials, which it is easier for a whole group of enterprises to solve than individual ones. And they are being solved, thanks, of course, to the joint fruitful work of the republic Gosstroy and Gosplan, appropriate ministries and departments, financial and planning organizations, party and soviet organs and all the workers at enterprises comprising the industrial centers.

It goes without saying that all the above in no way signifies that there are no unsolved problems, no difficulties, in creating territorial industrial complexes and managing them. And that includes us. They exist, and there are many. Construction schedules for individual enterprises comprising an industrial center are still frequently carried over without any particular justification or are just replaced, causing great organizational complications. Sometimes a particular ministry or department will suddenly refuse to allocate its share of construction funds. As before, the problems of supplying construction sites with needed materials, planning with consideration of the long-range development of the complex and managing it remain ongoing concerns. Many problems, and I won't list them all. And the opportunities opened up by the industrial center are still not being fully used, by any means. There's a whole host of work to be done here.

Conference participants, including representatives of our republic from BSSR Gosplan, BSSR Gosstroy and republic planning organizations, discussed in detail the pluses and minuses in organizing the construction and operation of industrial centers, shared their work experience along this line and worked out a broad, comprehensive program of activity for corresponding agencies in the years ahead. The recommendations and provisions adopted at the meeting have been submitted to the USSR State Committee for Construction Affairs and to the USSR State Planning Committee, Stroybank and Ministry of Finance for review and approval. It was recommended that the Belorussian experience be disseminated widely throughout the country.

Renovating Urals Plants

Moscow STROITEL'NAYA GAZETA in Russian 24 Jul 81 p 2

[Collection of three articles chosen by V. Pankratov, under the overall heading: "Renovating Urals Plants"]

> [Text] The renovation and accelerated technical improvement of existing enterprises is of ever-increasing urgency in industry of the Central Urals. The experience of the Ninth and 10th Five-Year Plans shows that the technical level of production can be significantly raised this way, with lower specific capital investments than for new construction. Some 91 billion rubles was directed into renovating and retooling existing enterprises in the 10th Five-Year Plan, nearly two-fold more than in the Ninth. The importance of renovation is increasing even more now: in the 11th Five-Year Plan, the rates of growth in capital investment will, for the first time in the history of the country's economic development, be set below national income increment, signifying that substantial improvement in capital investment effectiveness is inherent in the plan. Experience shows that funds spent on renovating and retooling existing enterprises are recompensed three times faster, on average, than those spent on new construction; the level of return on capital rises 1.5-fold and work schedules are reduced by 27 percent.

(M. Spektor, capital investment sector chief, Economics Institute, Ural'sk Scientific Center, USSR Academy of Sciences)

For example, as a result of renovation, capacities at "Uralmash" production association have been increased 1.5-fold just through labor productivity growth. Introduction of steel teeming using gate valves in the convertor and open-hearth shops at Nizhnetagil'skiy Metallurgical Combine and the start-up of metal scarfing machines have enabled us to free about 100 workers for other jobs. Renovation of the convertor shop by installing larger furnaces for making vanadium iron and intensifying steel production is saving 4.2 million rubles a year.

Many examples can be given of effective work along this line by enterprises of nonferrous and ferrous metallurgy, machinebuilding, mining and ore production. Sverdlovskaya Oblast saved 500 million rubles in capital investment through renovation in the 10th Five-Year Plan, and they were recompensed in 2.5 years, given a norm of eight years.

At the same time, the tendency to increase fixed assets by expanding enterprises still predominates. The replacement of obsolete and obsolescent equipment does not exceed two percent per year in the Central Urals, while domestic and foreign experience indicates this indicator should be 5-6 percent.

It should be noted that the very concepts "renovation" and "retooling" have not been fully worked out yet. In order to determine the character of particular investment measures, one should, we think, be governed not by the indicator of increase in space or basic production assignments, but by the number of workers and number of jobs. If growth in capacities and improved output quality are ensured without increasing the number of workers, the enterprise must then be considered renovated, regardless of other conditions. This is important because about a quarter of the new fixed production assets in the Central Urals are inadequately provided with labor resources.

As the proportion of renovation increases, the technological structure of industry must be improved and the effectiveness of capital investments must grow. The estimated cost of work has been increasing at individual enterprises in recent years in connection with increased equipment costs, higher expenditures on introducing automated systems and higher environmental protection expenses. When this has been accompanied by the accelerated start-up of projects, high losses have not resulted. But renovation time has not decreased, unfortunately. In ferrous metallurgy, for example, almost all capital investment has been directed into existing production and average construction duration is twice the normative.

The 26th Congress anticipated in its resolutions bringing the amount of unfinished construction down to the normative in the 11th Five-Year Plan. But in Sverdlovskaya Oblast, production projects whose construction has already begun will require 6-8 years to complete. In order to reduce the number of "unfinisheds" in the time alloted, we need to switch the main capital investment flow to renovation.

All these problems have been carefully reviewed at an oblast scientific and technical conference. Quite a few proposals were made on carrying out capital construction plans in the 11th Five-Year Plan, which averages 15-20 percent higher than the 10th. Consideration was given to the fact that there are practically no additional labor resources for construction. We can ensure a construction industry production increment of 10-15 percent, not more, by raising labor productivity. According to the most optimum appraisal, given retention of the rate of labor productivity growth and the work structure which have been achieved, about 18 percent of the capital investments will not be covered by capacities available today.

But the planned increase of enterprise retooling and renovation to 30-40 percent of capital investment will enable us to reduce the gap between work volume and construction industry capacities, inasmuch as the volume of general construction work is decreasing. Some renovation and retooling assignments (basically small projects within shops) should be transferred to the industrial ministries. Clients can do about one-fourth of the work themselves. Moreover, the ministries of ferrous and nonferrous metallurgy have large local trusts.

Under the leadership of the oblast Stroybank office and oblast planning committee, the lead planning institutes need to carefully audit construction project titles lists and single out the primary projects. The established construction-installation work limit must be oriented first of all towards effective investment measures. This will permit bringing the volume of unfinished construction down to the normative.

Builders also have reserves. They must change over to the new management structure with construction-installation association and mobile organizations as quickly as possible. Research by scientists shows that this could raise labor productivity 15 percent and decrease construction duration two-fold.

(V. Avdeyev, Uralgipromez institute director)

There is no denying our predecessors' ability to choose sites for building metallurgical enterprises in the Urals. They stand in the river valleys, on high manmade dams, and all around are the immense, smooth surfaces of ponds. When planners and architects laid out plants more than two centuries ago, they probably anticipated the enterprises would have a second childhood. Today, too, plant sites can be used to expand production without large capital expenditures.

The Sverdlovsk obkom and oblispolkom have approved and obtained the consent of the USSR Ministry of Ferrous Metallurgy and planning agencies on a target program for expanding old metallurgical plants of the Central Urals in the 11th Five-Year Plan. Some 1.5 billion rubles has been alloted for these purposes. Of that, 43 percent is being set aside for renovation and 47 percent for expanding existing enterprises, which is essentially renovation also. And only about four percent of the total is designated for new construction.

The collective of Uralgipromez Institute is the general planner for 15 Urals metallurgical plants. It has worked out a comprehensive plan of renovation organizational-technical measures. The primary thrust of this plan is to systematically increase capacities. We plan to increase the production of cold-rolled sheet, strain-hardened rolled metal, irregular and high-strength shapes. We plan accelerated development of the production of economical and special types of pipe.

We intend to increase cold-rolling mill capacities at the Verkh-Isetskiy and Nizhneserginskiy plants and build a complex at the Lys'venskiy plant and shops at the Omutninskiy, Chusovskiy and Saldinskiy plants in the 11th Five-Year Plan.

We anticipate planning work on organizing metal powder production at Staroutkinskiy Metallurgical Plant. The technical-economic substantiation for this new production facility has been worked out. We intend to build an iron powder shop capable of producing 15,000 tons per year, subsequently to be increased to 80,000 tons per year, at this plant.

Steel production will be further increased by replacing open-hearth furnaces with electric furnaces and convertors using electroslag remelting and by introducing continuous-teeming machines. One such machine, designed by Uralgipromez and built by "Uralmash" will very soon be put on-stream at Severskiy Pipe Plant. It has also been decided to build a continuous-teeming machine at Omutninskiy Metallurgical Plant. Construction and renovation will be the start of the rebirth of the Alapayevskiy and Staroutkinskiy metallurgical plants. This will enable us to resolve the sociodemographic problems of Alapayevsk and Staroutkinsk. In this regard, specific capital investment per ruble of increment in commodity output will be considerably below the branch average.

The question of building a number of plants to reprocess scrap where it is generated has been under discussion recently. It has been suggested that these mini-plants include a small (300,000 to 500,000 tons per year) electric steel smelting shop, continuous teeming and a rolling mill to produce widely used rolled metal.

They need not be built. For example, Nizhneserginskiy Metallurgical Plant has large- and small-section mills and an open-hearth shop.

Uralgipromez has done the technical-economic substantiation on the appropriateness of rebuilding the open-hearth shop, in stages, into a 500,000-600,000 ton electric steel smelting shop with continuous teeming to provide both plant mills with blanks. In this regard, the plant could be specialized to produce rolled metal for automotive and tractor industry.

Renovation often entails labor-intensive work such as breaking down existing installations, knocking out or putting up columns, deepening foundations and reinforcing foundation pits. In a majority of instances, this labor-intensive work is done by hand. It should be mechanized quickly.

Standardizing equipment and providing complete sets of prefabricated subassemblies intended especially for renovation would be of considerable importance. It would enable us to lower expenditures. Many problems could be solved in cooperation with designers, metallurgists and construction workers. Last year, Uralgipromez concluded 25 comprehensive creative cooperation agreements. They were all carried out, with a high economic impact. Jointly with the Uralchermet, the institute has created a metallurgical enterprises directors council whose primary task will be to work out the basic directions for using capital investments more effectively when renovating and retooling plants. It would obviously be correct for the USSR Ministry of Ferrous Metallurgy, Ministry of Heavy and Transport Machinebuilding, Ministry of Installation and Special Construction, Ministry of Construction of Heavy Industry Enterprises and the Soyuzglavmetallurgkomplekt to also create similar coordination councils. It would be appropriate to create a specific agency (a technical-economic council, for example) consisting of representatives of USSR Ministry of Ferrous Metallurgy associations and administrations and directors of planning and scientific research institutes and branch enterprises.

(S. B. Vozdvizhenskiy, Sverdlovskaya Obkom construction department head)

Sverdlovskaya Oblast is working out an interconnected system of renovation target programs. It has been proposed that 40-45 percent of the capital investment be directed into these programs. The party obkom branch departments and the primary party organizations are examining renovation proposals. A scientific-practical conference was held at which quite a few proposals and observations were also expressed.

Much work has been done by collectives of the Tagilstroy and Uraltyazhtrubstroy trusts and client representatives such as Nizhnetagil'skiy metallurgical Combine and Pervoural'skiy Novotrubnyy Plant, which are renovating convertor and pipe-rolling shops.

However, many difficulties have not yet been overcome. In particular, the existing normative documents and regulations do little to stimulate renovation, which substantially lowers the economic indicators of contractor organizations. But in fact, clients receive large profits from renovation. It is no secret that a majority of the clients gravitate towards new construction and often receive the support of the planning agencies.

The experience acquired and the economic search now enable us to scientifically develop and practically implement an effective renovation strategy. This has become the main direction in the Central Urals and is now widely recognized, but it needs the support of the USSR Gosstroy and Gosplan.

Mastering New Electric Power Capacities

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 31 Jul 81 p 2

[Article by Candidate of Economic Sciences A. Zarnadze and Candidate of Technical Sciences V. Serkov: "Face To Face With the New Construction Site"]

[Text] The enterprise is built.... Planning agencies have begun recording the output it must produce and supply agencies have issued job authorizations to consumers. They wait for deliveries...and wait, and wait. Letters of alarm fly to the USSR Gosplan and Gossnab and to the ministry to which the facility belongs. While they look into the matter, normal consumer plant operation is disrupted, disorganizing their own partners. Losses to the national economy snowball. But only the plant is blamed: it was built and put into operation, but it is completely unable to reach planned capacity, which capacity has, incidentally, been recorded in the national economic balance.

A typical situation: statistics bear out that planned capacity is mastered within one year at only four of every 10 enterprises put into operation, and one in every five begins operating at full capacity only five years later.

Why? Let's begin with the designers. They are concerned exclusively with releasing technical documentation to the client on time. Equipment manufacturers try to carry out the production plan ahead of schedule and at any cost. Builders try to build and release the project as quickly as possible. Let's say they have all coped with their tasks on schedule (a very improbable supposition) and, naturally, have received bonuses. Does this mean the new enterprise will operate normally? Not at all. In fact, each of its "fathers" resolved only its own local, if very difficult, intermediate task. But the end result, operating the project at full capacity within the normative schedule and according to the planned technical-economic parameters, is shifted to the shoulders of the operators. They stand face to face with the project: other participants in the investment process have already washed their hands of the matter.

The consequences of this "disjoining" of interests and responsibility is felt especially sharply in the leading, capital-intensive branches of industry, and in electric power engineering in particular. For example, if full utilization of 300-MW power units is delayed 8-10 years, conventional fuel overexpenditures will be 22 million tons and 810 million rubles in potential profit will be lost as compared with the planned figures.

Who answers for such mismanagement? No one. The planners and builders have long since been checked off and received their due, and the operators have the "objective" justification that their predecessors are at fault, although only they turn out to suffer for it

And in fact, the question of responsibility has yet to find an unambiguous answer. Before defining who is obligated to ensure utilization of new capacities, within what time period and at what level of quality, we need to improve the management of this complex process, adjust our planning and bring economic levers into play.

One example would be what happens at the USSR Ministry of Power and Electrification's Soyuztekhenergo association, which tries to combine the efforts of all participants in the investment cycle on new power units. They are enterprises of three ministries -- power and electrification, electrical engineering industry, and power machinebuilding. Joint orders are issued and complexes of measures are worked out. This has yielded good results, as the time involved in mastering new power units has been decreasing year by year.

It should be noted that Soyuztekhenergo has not obligated anyone to be the coordinator: no normative documents anticipate this role. The interrelationships of the partners are based entirely on good will. But the association has been forced to take up this coordination -- life, as they say, compels. For example, approximately 20 million rubles had to be spent just to eliminate factory defects in the 500- and 800-mW power units. And the claims against designers, planners and builders! And a majority of them arose when start-up and adjustment work was already underway.

The Soyuztekhenergo experience also suggests we need a target comprehensive program for utilizing each production facility. It must define exactly who is to do what when to achieve the end (not its own, but the common) result. Such a program could obviously be worked out by the lead ministry, coordinating it with all participants in the investment cycle. The lead introducing organization would monitor implementation of the measures and "interlink" the actions of the partners. But effective economic levers must be put in its hands.

Such levers formally exist. They are defined in the USSR Gosplan normative documents which establish the technical-economic indicators for utilizing new production facilities and schedules for achieving them. But how are these normatives carried out?

Let's say two years has been set aside for mastering a power unit. That is a realistic schedule and is generally met. During that time, instructions are also to bring such indicators as labor productivity, output net cost, return on capital and profitability up to planned levels. And that's where the "malfunction" occurs. For example, planned labor productivity (specific number of personnel per unit of installed capacity) was reached in six years at Kostroma GRES, in five years at Yermakovskaya GRES and in seven years at Krivoy Rog GRES. In a word, not one of the stations met normative schedules.

The explanation is simple. During the enterprise utilization period, much unfinished work is discovered, and it takes both time and money to eliminate it. During that period, neither material nor financial nor labor resources are spared, which is just what influences the shaping of economic indicators and objectively drags out the time needed to achieve them. If they are unrealistic, then, to put in bluntly, they are forgotten. Purely technical parameters -- production capacities and equipment readiness coefficient -- move to the fore.

We obviously need to re-examine the schedules for mastering economic indicators with consideration of the features of each indicator. Even a production facility's reaching planned capacity does not signify that the planned levels of labor productivity, net cost, return on capital and profitability have been reached. Different amounts of time are required. Different utilization periods need to be set for the lead and series production facilities, and the same applies for the first and subsequent lines of start-up complexes.

And finally, about incentives. Bonuses are now deducted for projects released for use. But why not make a large portion of them dependent on schedules for mastering technical-economic indicators and planned economic impact? It might be said in rebuttal that if you postpone a bonus too much, doesn't it lose its impact as an incentive? That depends on the participants in developing, planning, building and utilizing a new project, on the effectiveness of their cooperation. When each is concerned not only about quality and efficiency in his "own" stage, but also about the overall end result, then the economy will actually become economical.

Heavy Industry Construction

Moscow STROITEL'NAYA GAZETA in Russian 9 Aug 81 p 1

[Article by USSR Minister of Construction of Heavy Industry Enterprises N. V. Goldin: "Much Has Been Done, Much Remains To Do"]

[Text] Each year, our country traditionally observes Builders Day, honoring representatives of one of the most complicated and fascinating occupations for their services. All their plans and works are aimed at increasing the public wealth and strengthening the might of the Nation of Soviets, at developing its economy in every way possible and more fully meeting the needs of the Soviet man.

Today, new cities are appearing each year on the map of the Soviet Union, along with hundreds of industrial projects beginning operation, and tens of thousands of people move into new apartments every day. Upwards of 1,200 large enterprises were put into operation during the 10th Five-Year Plan.

Responsible new tasks have been set construction workers by the 26th Party Congress. Speaking at the communists' forum, Comrade L. I. Brezhnev, CPSU Central Committee General Secretary and USSR Supreme Soviet Presidium Chairman, especially stressed that "the new five-year plan will be a serious test for builders. One characteristic feature is the concentration of forces in every way possible on the fastest possible completion and start-up of those enterprises capable of ensuring the greatest increment in output and unplugging bottlenecks. We have already taken up this policy and must pursue it unswervingly."

In implementing the Congress' resolutions, construction participants are developing comprehensive competition aimed at accelerating the start-up of projects and at improving production efficiency and work quality. Thus, builders of heavy industry enterprises have carried out the plan for the first half of the year in terms of putting into operation capacities for the production of steel, rolled ferrous and nonferrous metals, sulfuric acid, chemical fiber and thread, synthetic resins and plastics, garments, iron ore mining and concentrate production. Capacities have been put into operation at West Siberian, Cherepovets and Saldinskiy metallurgical plants, Revdinskiy Nonferrous Metals Processing Plant, Mednogorsk Electrical Engineering Plant, Olenegorskiy Ore Enrichment Combine, Zyryanovskiy and Petropavlovsk garment factories, Lisichansk Oil Refinery and elsewhere. Given a plan for putting 40 production projects and capacities of the USSR State Economic and Social Development Plan products list into operation during January-June, a total of 42 were put into operation. The assignment for total housing released was met by 104 percent.

Introduction of the new management mechanism into construction is an important factor in improving construction production efficiency. It demands prompt concentration of forces and material-technical resources at the main projects, even and comprehensive start-up throughout the year and a reduction in the number of capacities being built at the same time.

One of the main directions in which capital construction efficiency is being improved is the continuing rise in the level of construction production industrialization, expanding the use of new and progressive components, improving construction organization and, on that basis, continuing growth in labor productivity. To this end, the USSR Ministry of Construction of Heavy Industry Enterprises has worked out and is implementing a complex of measures ensuring accelerated scientific-technical progress and an increase in output at construction sites. Ministry organizations now have an opportunity to build industrial complexes which are very complex in engineering terms at a modern technical level.

During the 10th Five-Year Plan, the level of fully prefabricated construction grew from 65 to 76 percent of all construction-installation work and the proportion of large-panel house-building construction increased from 64.4 to 73.9 percent.

The ministry is implementing a long-range program of developing a powerful construction industry to produce efficient components and materials for highly mechanized flow lines. Its implementation will permit a reduction in the labor- and materials-intensiveness and improved work quality. We also plan to develop the construction of monolithic reinforced concrete buildings.

In order to reduce the materials-intensiveness of construction, it is important to introduce efficient planning resolutions which make maximum use of economical components and efficient materials. A good example would be construction of the Krasnoyarskiy Heavy-Duty Excavators Plant. Installation of the basic facilities is being done in parallel with planning. The plan uses maximum design resolution unitization and standardization, extensive introduction of progressive prefabricated components and efficient materials and items. Labor productivity at this construction site is significantly higher than at other ministry subdivisions.

Improving management plays a most important role in raising the organizational level of construction production. A unified system of engineering preparation and efficient construction management based on weekly and daily schedules is in operation in the Ministry of Construction of Heavy Industry Enterprises. An extension of it is the nodular method of managing the construction of large industrial complexes which was developed by the UkSSR Ministry of Construction of Heavy Industry Enterprises. This method has been evaluated on its merits and adopted for use in many organizations.

From other directions, we should note the improvement in the organization, technology and mechanization of concrete work. A new stock form system has been designed and introduced in accordance with the target program. Its use permits reducing labor-intensiveness more than two-fold and saving large amounts of wood. At present, 60 percent of the monolithic concrete and prefabricated concrete components are being put up using these forms.

Ministry enterprises have set up the production of automatic cement mixers and pumps. By the end of the five-year plan, specialized organizations will be using them to transport and pour about a third of the cement mixture at construction projects.

The brigade contract is receiving further dissemination. Particular attention will be paid to organizing the integral-process contract at large industrial construction sites. Its basis is the nodular method and precise interaction of all general contractor and subcontractor organizations at the basic technological junctions ["nodes"] of the start-up complex to attain the ultimate goal of obtaining finished construction output. This was precisely how work was organized in building the sheet metal shop at Karaganda Metallurgical Combine.

The party and government are constantly concerned about construction workers, about improving their working and living conditions, raising the level of medical services and providing all types of personal services. This past year alone, ministry construction workers received about one million square meters of housing. Steps were taken to completely eliminate the remaining defective housing.

The initiative, innovation and bold beginnings by workers, engineers and supervisory personnel are playing a decisive role in successful fulfillment of the assignments of the first year and of the entire five-year plan as a whole. By actively introducing the achievements of scientific and technical progress, many builder collectives are greeting their holiday with remarkable successes. Among them are the Uralnerud Labor Red Banner Trust, Donetskmetallurgstroy, Yermakferrosplavstroy, Order of Labor Red Banner Trust No 7 of the Glavsevkavstroy, and others.

N. Bakumenko's consolidated concrete workers brigade from Elektrometallurgstroy (Staryy Oskol) has successfully retained its title of best brigade in the Ministry of Construction of Heavy Industry Enterprises. Good results were achieved by M. Birtsinayev's fitters collective (Zaporozh'ye House-Building Combine), R. Mikhaylishchev's concrete workers collective (Uralmashstroy), V. Zelezinskiy's carpenters and concrete workers collective (Krasnoyarskpromstroy) and O. Brem's concrete workers collective (Kazmetallurgstroy).

However, while celebrating their occupational holiday, the builders collectives must be clearly aware how many reserves of labor productivity growth and improved production efficiency and work quality remain unused. Production capacities are quite often released for operation late. "Everything planned -- into service!" In order to carry out this task, we need to develop in every way possible the all-around competition among related production facilities on the "Work Relay" principle approved by the CPSU Central Committee. Uniting the efforts of all construction participants is a guarantee of successful fulfillment of the assignments set by the 26th CPSU Congress.

'Khersonpromstroy' Chief Interviewed

Kiev PRAVDA UKRAINY in Russian 11 Aug 81 p 2

[Interview with UkSSR Ministry of Industrial Construction "Khersonpromstroy" Combine chief V. B. Losinskiy by V. Pankratov; date and place not specified]

[Question] "Khersonpromstroy" has been among the republic's best construction organizations for several years running now, coping successfully with putting industrial complexes, housing, cultural and personal-services facilities into operation. For its high efficiency and work quality in the 10th Five-Year Plan, the combine was awarded the challenge Red Banner and Memorial of the CPSU Central Committee, AUCCTU and Komsomol Central Committee and has been inscribed in the Book of Honor at the USSR Exhibit of National Economic Achievements. How has the collective begun the 11th Five-Year Plan?

[Answer] The general-contractor plan for the first half year was met by 114 percent and the plan for work done by our own efforts was met by 137 percent. The assignment for putting housing into operation was met by 109.5 percent.

The combine's collective is rightly proud that good labor productivity has been attained. Some 94.9 percent of the construction-installation work volume is done here using contract brigades. Output per worker exceeds the ministry average by 18 percent. The leading collectives are working especially well and include those of Hero of Socialist Labor N. Dashko, V. Fedorenko, I. Cherezov, V. Andruskiy, V. Mayatskiy, L. Lin'kov, D. Ovcharenko, N. Voloshko and others.

[Question] In view of the fact that not all construction organizations have managed to achieve such results, I would like to hear what you think ensures work stability.

[Answer] There are many factors, including raising the level of fully prefabricated construction, improving production technology, using progressive construction components and materials, using new machines and means of small-scale mechanization, introducing economical methods of management, and so on. We are working along all these lines and are striving for the best results in each.

But successful implementation of our measures and, consequently, realization of the end result of putting projects into operation, is directly dependent on management content and methods. The performance and discipline of the workers must be integrally combined with initiative and enterprise. Following the changeover to the new system of planning and economic incentives, we adopted as part of our restructuring a two-step management structure, combine and SMU [construction-installation administration], instead of a three-link structure of combine, trust and SMU.

Time has confirmed that our decision was correct. The path to the construction site has been shortened, it has become possible to decide questions of planning and maneuvering labor and material resources more efficiently, and material incentives funds can be used more effectively. All combine departments have begun working towards start-ups, a sense of responsibility for the work entrusted to them is greater among the workers, there is more collectivism in action and a greater awareness of personal involvement with everything happening at the enterprise.

And there has been one other plus. The two-step management structure has permitted fundamental improvement in engineering preparations for production. We have begun doing it comprehensively, organizing a special department for this (since last year, it has been converted into a large production-technological bureau). The quality of normative-technological documentation has been improved to make it more reliable for substantiating material-technical resources requirements. The department has assumed responsibility for technical evaluation of plans and estimates, shaping plans, protecting materials and components, and systematizing and developing the normative base. There is considerably less miscalculation of various kinds, fewer disparities, less uncoordination on which line engineers, technicians and brigade leaders need to spend their effort and nerves overcoming.

[Question] After that, you used the Vinnitsa method of brigade construction planning and supply?

[Answer] That system found fertile soil here. The sphere of application of brigade cost accounting was broadened. Previously, the combine had done about half the program by the contract method, and introducing brigade planning and supply enabled us to transfer all the basic collectives to cost accounting. We were fully aware of the organizational, social and educational role of lower-link cost accounting.

The following figures indicate the efficiency reserve opened up by using the brigade contract on a large scale. We saved the labor of 14 people for each million rubles worth of construction-installation work done. We began building projects faster and cheaper. In 1980, start-up schedules were moved up by a total of 1,091 days, as compared with the plan, which equals three years, and calculated cost was reduced by 345,000 rubles.

Beginning in 1978, we were the first collective in the UkSSR Ministry of Industrial Construction to use integral-process cost accounting in large-panel house-building; under this system, industrial production brigades, component set assembly shops, drivers from motor pool No 3, below-grade fitters, multipurpose finisher brigades and general contractor brigades installing buildings participated equally. All had a single final goal, to put houses into operation promptly, well-made and saving on calculated cost. All had identical material incentives and the wages of each worker corresponded to his contribution to the common cause.

The integral-process contract guarantees a high degree of organization and smoothness. Output per worker in house-building combine construction exceeded 37,000 rubles and output per fitter reached 110,000 rubles. In 3½ years, the average scheduled workforce at the combine decreased by 22.7 percent, while work volume increased by 11 percent.

[Question] Large-scale cost accounting has evidently had a favorable influence on profitability.

[Answer] Our profit has been sizable, more than three million rubles last year. And that is natural: where start-ups are on time and ahead of schedule, there are profits.

In general, profit has been viewed here as a means of improving the quality of the collective's labor. The higher it is, the greater the deductions to the material incentives fund. In recent years, not one of our workers has gone without an extra month's wages. Much attention has been paid to economic work at the combine, to carrying out specific steps to reduce expenditures of raw and other materials, fuel and energy. Special importance is attached to introducing economical components and materials and progressive technologies.

What we have succeeded in doing, it seems to me, is to teach our engineers to count their pennies. Before using any innovation, they now study, analyze and calculate in depth what savings in labor and funds this will provide under our conditions. If the innovation is worth it, it is included in the plan of organizational-technical measures and must be introduced.

Last year, the plan of new equipment measures included 56 entries, and all have been introduced in full. Among them are such progressive ones as nonroll roofing on an asphalt emulsion base, an installation for laying concrete floors using a vacuum, the use of plastic instead of metal pipe for laying telephone cables, using packaged sheet roofing, using the highly productive "Salyut" plastering stations, using a high-pressure painting unit and other efficient machines and devices. The annual savings realized by using these innovations is 855,000 rubles in funds and 3,300 man-days of labor. This year, we expect to save even more.

The combine's collective is expanding with new vigor the socialist competition to continue improving efficiency and work quality.

Permskaya GRES Construction

Moscow IZVESTIYA in Russian 26 Sep 81 p 1

[Article by V. Biryukov, Permskaya Oblast: "New Construction Project Begins With Housing"]

[Text] Construction of the largest GRES in Europe, the Permskaya, is developing on the Kama River near Dobryanki. Installation of the 4.8 million kilowatt station is outlined in the "Basic Directions" of the country's socioeconomic development in the 11th Five-Year Plan.

The launching site for the power complex was a happy choice, with a transport artery and railroad line alongside and far-flung power utilities, promising chemical production facilities, potassium and coal industry not far away. All this was anticipated when working out the general plan.

The station's chief engineer, Boris Mikhaylovich Krokhalev, helped install several large power centers in Bashkiria and the Central Urals before coming to Dobryanki. He now speaks enthusiastically about the many engineering innovations being used at the Kama construction site: "The turbines being manufactured for the GRES by the collective at Metallicheskiy Plant in Leningrad are designed to burn a coal dust mixture, meaning the boiler being made at Krasnyy Kotel'shchik association in Taganrog will also be of a new design.

Take the shore pump station, whose equipment is being produced at "Uralgidromash." Inasmuch as the depth of the Kama constantly changes, the station's pumps are of the circulation, diagonal type. They will equalize the rise and fall of the river level.

Krokhalev also lists among the successful engineering resolutions the huge 330-meter GRES pipe. Its inside walls are finished in polymer concrete, which he considers to be a reliable and economical coating.

Many mature people who have demonstrated their ability at power engineering projects in the Urals such as starting up the third fast-reactor unit at Beloyarskaya AES and the 10th unit at Reftinskaya GRES have come to the Kama site, which has been declared an All-Union Komsomol project. They have acquired experience in the specialized "Uralenergostroy" trust and in organizations allied with it. Here, too, on the Kama, they are making their own contribution to improving labor organization and socialist competition. Their goal is to put the 800,000-kW first power unit into operation in the third year of the five-year plan and to continue increasing the strength of the Kama giant through high-quality installation and adjustment.

I have had many occasions to visit power sites in the Urals, Siberia and Kazakhstan. Their construction ordinarily begins with the industrial projects, for which technological equipment has been brought to the site ahead of time. And it has lain there in anticipation of installation of the main structure and accompanying buildings. The technological chain of the complex has thus extended out from the middle, which has invariably led to failure to meet construction schedules.

At the Kama site, this inefficient practice has been replaced by a progressive approach to solving the complex problems of modern construction. Carrying out the plan, which is estimated to cost nearly a billion rubles, began with development of a microrayon centered near a riverside park. The first apartment building has been begun and the new rayon has been named after the builders. It now comprises 75,000 square meters of housing. More than 2,000 families working at the all-union construction site have received modern apartments.

Power-engineering workers are building housing with concern for the comfort of citizens and their children. A school with places for 1,170 children and two children's combines have been opened alongside the occupied houses, and dining halls, cafeterias, personal services facilities and sports facilities have begun operating. They have provided themselves with well-equipped dormitories and construction of a vocational-technical school has begun.

Our conversation with Yevgeniy Andreyevich Abramov, Dobryanki gorkom first secretary, Vadim Aleksandrovich Ladugin, a station director and Aleksey Pavlovich Doroshin, the manager of "Uralenergostroy" trust, and with all those we had occasion to meet in work superintendent trailers, those working the cranes and in the trenches laying still-warm concrete -- all began with discussion of the everyday needs of construction workers.

"The main thing is to finish building the industrial base as quickly as possible," we were passionately informed by senior Urals builder A. Doroshin, who was recently awarded the Order of Lenin.

"There is a strong mortar center and several base plants, quarries have been worked and roads laid, and a railroad line has been brought to the site. But this is still not enough, when in fact, 25 million rubles has been alloted to build the base. With money like that, we can create strong construction rear organizations."

"On the initiative of the trust, we are beginning construction of sovkhoz worker cities," adds party gorkom secretary Ye. Abramov. "They will provide the GRES food units with dairy products and fresh vegetables. The interaction between city and countryside, between the village and the all-union construction site, is fruitful and reliable."

By the end of the five-year plan, the population of Dobryanki will have increased by approximately 16,000. The new settlers will be provided with housing; an additional 200,000 square meters or so is to be put into operation. However, the overload on public transport is already making itself felt. The construction site stretches two dozen kilometers from northwest to southeast. However, the territorial motor transport administration of Permskaya oblispolkom has not added special routes inside and outside the Dobryanskiy tract. And each organization participating in construction of the GRES has been forced to have its own bus and route. But still, it is after all hard to organize the normal delivery of 3,000 workers to production projects and then back to the housing development after their shift is done. Therefore, in peak hours and in spite of all the regulations in effect, people hurry to and from their jobs on running boards, in loaded KrAZ's, in produce trucks..., in a word, however they can. And what is going to happen when the Permskaya GRES workers collective is three or four times as large?

Construction site leaders are viewing this with alarm. Several variants are being suggested which urgently need discussion in the oblast center and in the USSR Ministry of Power and Electrification. Local workers are suggesting that a streetcar line be run on the roads now being built, and that regular bus routes be set up. The construction of river landings would also help solve the problem: the GRES site stretches alongside the river, and many facilities of the power complex are immediately adjacent to the Kama reservoir. And that portion of the housing development being built up runs smoothly down to the riverbank, to a broad, sandy stretch of the river.

A critical look must also be taken at the plan for distributing trade and public catering enterprises and cultural and education centers. It is important that stores, cafeterias and dining halls be located close to jobs and residences.

A very large power complex is taking shape on the banks of the Kama, in the center of the Western Urals. And those by whose hands it is being created are doing everything they can to make it fully operational in the 11th Five-Year Plan. All the more reason close attention must be paid to their needs.

Mazheykyay Oil Refinery

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 5 Sep 81 p 1

[Article by N. Kurepin, chief of the Baltic Construction Installation Administration: "Mistakes Repeated: Why the Second Line of Mazheykyay Oil Refinery Is Being Built Slowly"]

[Text] No matter how great the joy of victory, it is always useful to look around and ask oneself at what price was it won and what lessons have been learned.

This is not just rhetoric. The collective of our installation administration experienced an enormous sense of pride when the State Commission signed the document accepting the first line of Mazheykyay Oil Refinery for operation. We know the price of that victory and remember the difficulties we could have avoided but had to go through. And when our efforts were turned towards building the refinery's second line, we involuntarily began drawing comparisons with the first line.

The situation which evolved in building this line is certainly instructive, and I should like to recall it briefly. The capacities were initially set for start-up in 1974, then 1978, and finally, 1979. In 1974, only 19 percent of the total funds for construction-installation work were allocated, and in 1978 only 72 percent had been allocated. Then late in 1979, so much funds were released that construction organizations were simply not in a position to utilize them, although they did carry out the program three times in excess of their nominal capacity. Such uneven financing naturally led to an extreme increase in the number of construction workers being sent in from other subdivisions and, as a consequence, to lower labor productivity. Failure to observe the technological sequentiality of construction-installation production became a characteristic phenomenon of this period.

Unsystematic deliveries of equipment had a negative effect on the overall tone of the construction project. The order in which it arrived was totally unconnected with the sequence in which the complex was being started up. One example would be installation of the so-called section 100, the initial fractionation facility. The crude oil refining process begins with the start-up of this section. Due to late equipment deliveries, builders and fitters began installing it under extremely embarassing conditions, just five months prior to start-up of the facility. While the refinery was being built, the technical documentation underwent so many additions, changes and adjustments that it was not clear at times which there was more of, installation or dismantling.

But we could not say today that the mistakes permitted when building the first line are not being repeated in the second. The lack of coordination between financing and the start-up schedules is already obvious. In December 1980, the union Ministry of Petrochemical Industry, Ministry of Construction and Ministry of Installation and Special Construction Work approved joint measures to ensure the start-up of ethyl-mixing capacities in 1981 and of start-up and adjustment work on a bitumen production installation. Naturally, all the construction workers' efforts have been thrown into actualizing the planned program since the start of the year. Then, in the middle of the year, when the outlines of the projects began to take shape, it turned out that the client would not be receiving this year the equipment needed to finish the installation work. Thus, six NMP 2500-74 pumps for the ethyl-mixing complex had not been ordered. This means a complex costing four million rubles will be inoperative for who knows how long due to equipment costing only 54,000 rubles. How can this be explained to the people who targeted their efforts to carrying out this task? What will happen to the collectives which took on socialist obligations to start up the complex ahead of schedule?

The same ugly picture is to be seen in construction of the bitumen installation. The first half of the year is over, and the equipment is just starting to arrive. Deliveries of heavy technological apparatus generally needed to start installing were postponed to the end of the year. As a result, construction and installation work has been paralyzed.

In order to somehow justify the interruptions in deliveries, the Ministry of Petrochemical Industry reviewed the titles list in mid-year and it turned out that builders and installers had not been working on a start-up project for the past six months. According to the new titles list, it was an entirely different project, the No 2 LK-6U multiple-unit complex, that was to be financed. But the general contractor had not ordered the reinforced concrete for this installation and the installers did not have the technical documentation, not to mention the fact that not even elementary engineering preparations had been done at the project. Incidentally, the documentation for the complex which, as the appropriate provision states, must be received a minimum of six months prior to the start of construction, will only be ready in 1982.

I should like to hope the Ministry of Petrochemical Industry will finally draw from this sad analogy conclusions which offer an opportunity to work at a very large construction site as is required by established procedure.

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PLANS FOR HOUSING REPAIR, UPGRADING DISCUSSED

Moscow ZHILISHCHNOYE STROITEL'STVO in Russian No 6, Jun 81 (signed to press 11 Jun 81) pp 3-4

[Article by V. V. Meshechek, Gosgrazhdanstroy Housing Repair Administration chief: "At A New Stage"]

[Text] The "Basic Directions of USSR Economic and Social Development in 1981-1985 and Up To 1990" anticipate "systematic improvement in the housing conditions of the Soviet people, improving the comfort and raising the level of public amenities. ...Take steps to improve operation of the housing stock and to improve its protection."

Implementation of these tasks demands not only doing large amounts of housing construction and improving the quality of that construction, but also a thrifty attitude toward the existing housing stock. Today, nearly five billion rubles a year is being allocated for housing repair, that is, about 30 percent of the funds being allocated for the construction of new housing. In 1980, about 70 million square meters of living space was overhauled through these funds alone. However, there are still many serious shortcomings in this work. The existing housing system management structure is cumbersome. The funds allocated for operating and repairing the housing stock are often used insufficiently effectively. The quality of capital repairs and routine maintenance on housing is poor in many instances.

Speaking in the CPSU Central Committee Accountability Report to the 26th Party Congress, Comrade L. I. Brezhnev spoke of the necessity of increasing the responsibility for housing use and protection. "The Principles of Housing Legislation, a draft of which is being discussed widely by the community, will, I think, help bring order to this work," said Leonid Il'ich. The Gosgrazhdanstroy is participating in preparing this document.

The draft Principles set large tasks in protection, in prompt and high-quality repaid and in conducting a unified technical policy in the area of housing repair.

In view of the importance of the task set, of ensuring the protection of our housing, the Gosgrazhdanstroy has created a Housing Repair Administration which has recently done a certain amount of joint work with institutes of the Gosgrazhdanstroy, the Academy of Municipal Services imeni K. D. Pamfilov and other institutes. "Methods Recommendations on Developing Housing System Management Plans," "Temporary Differentiated Norms of Material-Technical Resources Expenditure to Operate and Repair Housing

Stock" and "Regulation on Author's Supervision of Planning Organizations for Comprehensive Capital Repair of Housing and Cultural and Personal-Services Projects" have been worked out.

With a view toward further increasing the effectiveness and quality of housing stock repair, the administration has worked out a long-range program of basic directions in implementing a unified technical policy for the 11th Five-Year Plan. It anticipates:

organizing and improving the network of scientific research and planning institutes for the capital repair of housing and public buildings;

improving the system of construction-repair production management, raising the level of capital repair industrialization and construction-repair work mechanization, steps to develop the production bases of construction-repair organizations;

improving the efficiency and quality of construction-repair work, developing and introducing a comprehensive quality control system for capital repair on housing and public buildings;

shaping and coordinating plans for the most important scientific research and planning work by the Gosgrazhdanstroy in the area of repairing existing housing stock and improving the operating indicators of housing under construction;

improving the insulation of buildings when repairing them in order to reduce nonproductive expenditures of fuel and energy resources;

studying, generalizing and disseminating positive domestic and foreign experience in planning and making repairs, modernizing and renovating housing and public buildings.

One of the most important steps in implementing a unified technical policy must be the creation of a system of unionwide normative-methods documents and state standards on housing and public building repair.

The system will be an aggregate of normative and methods documents and state standards defining and regulating the planning, financing, design and organization of construction-repair production.

In 1980, the Gosgrazhdanstroy reviewed proposals by the ministries of housing and municipal services of a number of union republics and the country's leading scientific research and planning organizations on developing such a system and on the composition and amount of unionwide normative and methods documents. The Gosgrazhdanstroy's housing repair administration held a conference to discuss creating such a system. The conference examined the principle of developing documents for capital repair and individual organizational problems in developing the system.

Lenzhilproyekt Institute has worked out a draft "List of Unionwide Normatives and Methods Documents on Housing and Public Building Capital Repair." The draft List includes more than 200 construction norms and regulations, rules, normatives, instructions, guides and recommendations. It is proposed that the construction norms and regulations and other normative documents in effect be supplemented and altered to take into account the requirements and specifics of construction-repair production. About 30 documents are to be reworked. The applicability of the remaining documents being used in construction will be extended to capital repair without any changes.

The development of new and review of existing documents included in the draft List is to be done by scientific research and planning organizations of the Gosgrazhdanstroy, union republic ministries of housing and municipal services (ministries of municipal services) and gosstroys, and the Moscow and Leningrad Soviets of People's Deputies ispolkoms.

In order to resolve this task, we will need to improve the network of scientific research and planning organizations of the union republic ministries of housing and municipal services, as well as to reorient somewhat and use the capacities of the union republic gosstroy institutes to solve problems of scientific research and planning on repairing and renovating housing stocks and cultural and personal-services projects and coordinating the activity of all these institutes.

The creation of 16 unionwide documents included in the draft List has been included in the Gosgrazhdanstroy's 1981-1985 scientific research work program, which anticipates development of draft recommendations on improving the management of construction-repair production, a program of state standardization for capital repair, draft rules on contractor agreements to perform capital repair, draft methods for evaluating the economic and social effectiveness of capital repair, modernizing and renovating housing stocks, and a number of other documents.

The system of unionwide normative-methods documents and state standards will subsequently be supplemented with consideration of the achievements of science and technology in the area of planning and organizing the repair of housing and public buildings.

The development and introduction of a system of unionwide normative-methods documents and state standards for capital repair on housing and public buildings will permit elevating to a new level questions of housing repair, increasing housing comfort and raising the level of public amenities, and taking steps to improve the operation of housing and public buildings and to ensure their protection.

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CONSTRUCTION

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CAPITAL REPAIR OF HOUSING DISCUSSED

Moscow ZHILISHCHNOYE STROITEL'STVO in Russian No 5, May 81 (signed to press 28 Apr 81) pp 3-6

[Article by engineers V. V. Meshechek and V. P. Litovchenko (Gosgrazhdanstroy): "Analysis of Housing Capital Repair"]

[Text] The "Basic Directions of USSR Economic and Social Development in 1981-1985 and Up To 1990" note the necessity of improving the quality of housing construction, as well as of taking steps to improve operation and maintenance of the housing stock.

One of the most important measures ensuring protection and updating of housing for its entire service life is capital repair.

Capital repair requires expenditures of considerable labor and material resources. Building components and equipment are often restored on a new technical basis and elements of modernization are included, leading to higher consumer cost of the housing. In so doing, the economic content of capital repair is also expanded since, under certain conditions, a reduction in or the elimination of both obsolescence and physical wear is ensured and the task of expanded reproduction is resolved.

During the years of Soviet power, our country's housing stock has grown immeasurably, both qualitatively and quantitatively. The level of utilities improvements is constantly rising in housing. The entire urban housing stock has been provided with electricity.

The housing stock of the Soviet Union is characterized by a great variety of types of development connected with national, historical, social, economic, territorial and climatic factors.

Moreover, in such cities as Moscow, Leningrad, Kiev, Novgorod, Yerevan, Tbilisi, Baku, Riga, Tallinn and others which have been developing for long periods there are historical centers, large complexes of unique architectural ensembles which shape the unique, individual appearance of these cities and which are of great historical value.

Maintaining housing in normal operating condition is the basic task of capital repair.

It should be noted that houses belonging to the ministries and departments are basically less well-provided with public amenities and are inadequately equipped with utilities. Moreover, along with well-built houses with all types of utilities equipment, the country still has a significant stock of settlement-type dormitories. There is a significant number of houses with a great deal of physical wear.

The number of houses overhauled in 1979 was 56,763 (25.7 percent) more nationwide than in 1970; the increase was 63,450 (38.9 percent) for housing for enterprises subordinate to ministries and departments and 3,850 (6.3 percent) fewer houses of local Soviets were overhauled. The local Soviet major overhaul plan was carried out by 102-104 percent and that for housing of enterprises subordinate to ministries and departments -- 92-96 percent.

It should be noted that the major overhaul plan for housing space and number of buildings (subject to major overhaul) of the local Soviets was not met only in 1971, 1972 and 1973 during the 1970-1979 period. In the other years, the plan was overfulfilled in terms of this indicator.

Expenditures on maintaining the ministry and department housing stock were 23 percent higher than for the local Soviet housing stock. This confirmed the appropriateness of eliminating departmental disconnectedness as quickly as possible, as well as the necessity of conducting a unified technical policy in operating and repairing collectivized housing.

The average estimated cost of finished capital repair per square meter of housing space was from 6.5 (Armenian SSR) to 51.4 (Lithuanian SSR) rubles in 1979. Over the above-indicated period, the average estimated cost of capital repair tended to increase, both for the country as a whole and for the republics.

Routine maintenance expenditures increased by 579 million rubles (or 56 percent) in 1979 as compared with 1970 and were 1.348 billion rubles for the country as a whole. Routine housing stock maintenance expenditures of the local Soviet housing administrations had increased by 184 percent in 1979, to 569.8 million rubles. Routine maintenance expenditures on operating the enterprise housing stock of ministries and departments had increased by 154 percent in 1979, to 778.7 million rubles.

Routine maintenance expenditures varied as follows by union republic: increased by 122 percent for the RSFSR local Soviet housing stock, by 120 percent in Estonia and by 124 percent in the Ukraine. The greatest increase in routine maintenance expenditures was noted in Georgia (256 percent), Kirghizia (226 percent) and Kazakhstan (223 percent).

Routine maintenance expenditures on operating the housing stock of ministries and departments increased 130 percent for the Ukraine, 108 percent for Tajikistan and 119 percent for Latvia. The greatest growth in routine maintenance expenditures was noted in Armenia (220 percent), Moldavia (217 percent) and Uzbekistan (182 percent). A comparison of the growth in routine maintenance expenditures shows that it was an average of 20 percent higher for the ministries and departments than for the local Soviets.

Local Soviet housing stock capital repair planning, especially in the large cities, is rather a complex process demanding constant improvement. Thus, the Moscow gorispolkom approves a capital repair plan for the current year based on rayon and repair organization sources of financing. After this, the rayon Soviet ispolkoms approve address lists of houses subject to capital repair in the given year and transmit them to Gosbank institutions. Prior to drawing up and approving the annual plan for financing capital repair, specialized rayon Soviet commissions choose houses to be repaired at the start of the year preceding the planning year. Lists indicating addresses (house address lists) are drawn up for the selected houses. In this regard, the commissions review the reports submitted by ZhEK [house operation commissions] and the technical conclusions of the rayon housing administrations and sort through worker complaints. The address lists are drawn up separately for houses requiring amenities and comprehensive major overhaul. The amenities lists are agreed to by the Moscow housing administration and the comprehensive major overhaul lists are, in addition, approved by the deputy chairman of the Moscow gorispolkom.

The housing stock capital repair plan does not include restored structures it would be inexpedient to provide with public amenities or structures to be written off according to the long-range city development plan. By way of an exception, only protective, insulating work to improve sanitation conditions can be done on such houses using funds allocated for capital repair.

The annual housing capital repair plan designates the projects to be repaired and indicates for each the estimated cost of the project, estimated expenditures for the planning year broken down by quarter, scheduled start and completion of the work and annual level of expenditures for all projects.

This procedure for drawing up capital repair plans was instituted on instructions from the USSR Gosplan, USSR Ministry of Finance and USSR Gosbank for the departmental housing stock (excluding kolkhozes), as well as for the local Soviet housing stock.

In cities and urban-type settlements, the capital repair of local Soviet housing stocks is provided with monetary means through a special capital repair financing fund (city fund). It is formed basically through allocations from the budget, deductions from average payments for nonresidential premises run by housing administrations, ZhEK's and municipal enterprises and being leased to trade and other organizations for use as stores, warehouses, storage facilities, and so forth, as well as from rent for premises being rented by housing administrations and municipal services departments.

The sources for financing major overhauls on fixed housing assets in the budgets of production associations, enterprises and economic organizations are depreciation deductions of 20 percent of rent payments for nonresidential premists and, in addition, funds from the fund for sociocultural measures and housing construction, the consumer goods fund and depreciation deductions obtained from superior organizations for redistribution.

At present, there are about 6,600 construction-repair organizations. However, the quality of construction-repair work is still at a low level in a majority of instances. Construction-repair organizations are often diverted to new construction. Inadequate use is made of industrial construction components, parts and subassemblies and progressive methods of labor organization and production mechanization in capital repairs on housing. There have been instances in which housing which is uneconomical to operate, in particular, houses with high heat loss, have been planned and built. The funds being allocated for repairs are not always used effectively.

Considerable funds (10 percent) being allocated to repair housing are used to eliminate defects in newly-built houses.

Prior to 1978, repairing housing was a prerogative of local agencies, which did not always permit the efficient use of funds allocated for this purpose.

According to the USSR Council of Ministers decree "On Steps to Further Improve Operation and Repair of Housing," the most important capital-repair improvement tasks are:

improve the management of construction-repair production;
planning, financing and organizing housing repair work;
developing the production-technical base of construction-repair organizations;
improve material-technical supply for housing repair work;
raising the operation indicators of housing under construction.

Beginning in 1980, the union republic Councils of Ministers, USSR ministries and departments, Moscow and Leningrad gorispolkoms were set capital repair assignments for the housing stock run by them in the USSR State Economic and Social Development plans. The development of annual, five-year and long-range capital repair plans is done by the USSR Gosplan.

Long-range repair plans are worked out for the purpose of putting the entire housing stock into good order, raising its operating and sanitation-engineering indicators to the maximum. They define work volumes broken down by five-year plan. In major city planning, it is intended that long-range capital repair plans will be coordinated with the city general development plans, permitting, in addition to putting individual buildings into proper order, consideration of the demands for comprehension improvement in blocks and microrayons of evolving city development and the extensive planning and production of repair work using the block-group method. The five-year plans include work volumes by year and are the basis for annual (current) planning. In annual planning, the five-year assignments are refined and their maximum balance with material-technical resources is ensured.

It should be noted that the level of housing operation, repair and management still does not meet modern requirements and is retarding implementation of our intended plans. This causes the expenditure of additional funds.

A significant portion of the housing stock is disconnected, that is, in the hands of various enterprises. In the RSFSR alone, there are upwards of 20,000 small organizations of different ministries and departments. These organizations do not have production workshops, technical monitoring equipment, or the tools and equipment for eliminating repair accidents.

Each year, about 150 million rubles of the funds allocated for departmental housing repair is not utilized. At the same time, the maintenance of organizations called upon to concern themselves with this is very expensive to the state. It has been estimated, for example, that at lease 1 ruble 80 kopecks per square meter of housing should be spent each year on routine maintenance to avoid premature building wear. But only 20 kopecks is actually spent (for the RSFSR).

At present, questions of a managerial and organizational nature are taking on great importance. The basic link in the housing system structure has become the production trust. The first such trusts were created in Leningrad 10 years ago. Each of them has 5-6 ZhEK's and housing administrations. The RSFSR now has more than 200 such trusts. Experience has shown that if they are armed with sufficient equipment, expenditures on housing stock operation are significantly (40 percent) lower than expenditures by ZhEK's and housing administrations for these purposes.

However, the technical level of housing stock operation is still low. Only one-third of the workers are employed at routine and preventive maintenance and two-thirds are servicing personnel. The level of labor mechanization in the housing system is lower than 40 percent.

Experience has shown that when the housing stock is protected and the forms of management are improved, when all local agencies display great concern for this work, the plans for preparing the city economy for winter and those for repairing and maintaining the housing are carried out successfully.

The indicators of local Soviet housing stock operation and development for the USSR as a whole in 1975-1979 are given below.

The local Soviet housing stock space recorded by the USSR Central Statistical Administration in late 1979 was 652.9 million square meters of usable space (100 percent) and 417.5 million square meters of living space (64 percent).

In 1979, some 98 percent of the local Soviet housing stock was concentrated in the cities and only two percent was in settlements. In late 1979, the local Soviet housing stock included about 13.58 million apartments, including 13.29 million in cities (97.8 percent) and 290,000 in settlements (2.2 percent). The local Soviet housing stock in 1979 was 306 apartments per 1,000 people (an average of 3.5 people living in each apartment), and 312 per 1,000 in settlements. These figures were 3.7 and 3.8 percent higher, respectively, than in 1975. So the proportion of family occupancy increased during 1975-1979.

The average availability of housing space in local Soviet houses as of late 1979 was higher than in 1975. A higher specific availability of housing space per person than the national average was observed in Latvia, Estonia, Uzbekistan and the Ukraine and, among the union republic capitals, in Riga, Kiev, Vilnius, Tallinn, Tashkent and Tbilisi in 1979. In the other republics, such as Turkmenia and Azerbaijan for example, the specific availability of housing space was somewhat lower than the national average. In 1979, the local Soviet housing stock increased by 13.7 million square meters through new construction, a 71 percent annual increment, and by 5.5 million square meters, or 29 percent, through accepting housing from other enterprises and organizations.

The average annual amount of local Soviet housing stock falling into disuse in 1979 was 2.1 million square meters of housing space (0.5 percent of the stock in the corresponding year).

It should be noted that a static interrelationship is observed between housing falling into disuse and housing stock volume (city size). In small and medium-sized cities, the housing stock is characterized on average by lower capitalization, so relatively large amounts of housing fall into disuse due to dilapidation. However, the rapid development of industry and urban transport inescapably lead to the renovation of housing regions and transport centers and to an increased withdrawal of housing and other buildings and structures from use.

Bunk-bed dormitories comprised 801,100 square meters (0.3 percent) and barracks-type dormitories 1,108,600 square meters (0.2 percent) of the total local Soviet housing space in 1979. The area of all nonresidential premises in housing and nonresidential structures increased from 52,931,000 square meters (100 percent) in 1975 to 58,863,000 square meters (110 percent) in 1979. In this regard, the area of nonresidential premises in nonresidential structures increased from 20,981,600 square meters in 1975 to 22,750,900 square meters in 1979. This dynamic testifies to a slight increase in new housing space in nonresidential premises intended basically to meet the daily needs of apartment dwellers. On the whole, rentals of nonresidential space to householders increased from 48.9 million square meters in 1975 to 54.6 million square meters in 1979.

Physical housing stock wear was 17 percent in 1979, as against 17.3 percent in 1975. Actual expenditures on capital repair, modernization and acquiring fixed assets were 887.5 million rubles in 1979 in the local Soviet housing system, as against 739.6 million rubles in 1975.

Continued rise in the level of sanitation engineering equipment and expansion of its products list, as well as the increasing number of stories in housing (elevators, additional heat losses, and so forth) unavoidably lead to higher maintenance expenditures and increased operating expenditures.

A trend towards growth in both expenditures and revenues has been observed for the local Soviet housing stock, with revenues exceeding expenditures as follows (rubles per square meter of housing):

year	revenues	expenditures
1971	2.93	2.91
1975	3.03	2.96
1979	3.08	3.11

In 1979, USSR local Soviet householders, on average, covered practically all their own expenditures in the amounts anticipated by the financial-economic plans. However, expenditures exceeded revenues in the local Soviet housing system in the RSFSR, KaSSR and ArSSR in 1979. At the same time, there are still quite a few householders operating at a loss, including ones in Moscow.

The specific amount of revenues (rubles per square meter of housing space) was 3.31 in the RSFSR in 1979 and 3.14, 3.04 and 3.02 in the ESSR, LaSSR and LiSSR, respectively. The lowest revenues were in the ArSSR, TSSR and TaSSR (2.09, 2.18 and 2.29, respectively).

The noted balance of revenues and expenditures is still hypothetical, inasmuch as statistical reporting does not take into account subsidies and other sources of funds being allocated for capital repair and modernizing housing.

From 1975 through 1979, the total (usable) space in the USSR ministry and department housing system increased from 830.4 to 960.8 million square meters (13.4 percent) and housing area increased from 543.4 to 623.8 million square meters (22.9 percent).

Planning and contractor construction-repair organizations of local Soviets, ministries and departments are currently engaged in planning and carrying out capital repairs on housing stock in the country.

The basic volumes of housing stock capital repair planning work are done by upwards of 130 planning organizations of the union republic housing and municipal services ministries. Some of them are large, specialized scientific research and planning institutes with a multiple-specialty plan of surveying, estimate-planning, nomative-methods and scientific research work. Their annual program exceeds 4-5 million rubles, reaching 15 million rubles in the Ukrzhilremproyekt. The number of workers fluctuates between 1,000 and 5,000. Many institutes are equipped with modern office equipment and means for mechanizing planning. However, not all union republics have created such institutes. The USSR Gosstroy has approached the union republic Councils of Ministers with a suggestion that republic scientific research and planning institutes be created within the ministries of housing and municipal services to deal with questions of housing capital repair and routine maintenance and that the union republic gosstroys be entrusted with methodological supervision of the work of these institutes and with implementing a unified technical policy on questions of housing major repair and routine maintenance.

The valuable experience accumulated by the Lenzhilproyekt in planning the repair of old housing deserves attention. This institute, jointly with the Leningrad Main Architectural Administration, Lenzhilupravleniye and Leningrad Capital Repair Administration, has resolved a whole series of problems associated with updating old buildings, the bulk of which are within the historic city center.

Technical tasks are resolved by ensuring post-maintenance building safety for the subsequent normative period through the restorative repair of bearing and safety components. Apartments with amenities and all modern utilities are created for family occupancy in the course of this housing renovation and repair. In this regard, intra-apartment space is comprehensively provided with amenities and landscaped, and the network of services-sphere enterprises is expanded and appropriately located.

One important condition of ensuring long-range planning, design and organization of repair work in Leningrad is the continuous surveying of housing buildings, which was first done by the Lenzhilproyekt.

In Moscow, a system of planned preventive maintenance based on unified organizational, scientific and technical measures has been worked out and is being introduced with consideration of socioeconomic factors.

As distince from previous practice, under this system, a house is viewed as an inseparable element in the complex organization that is the city. From positions of utilities availability, repairs here are called upon to comprehensively solve the problems of renovating the urban environment, which is aimed at creating the necessary insolation, sanitation, public-amenities, landscaping, preservation of historical and cultural monuments, and other conditions.

An analysis made of statistical data permits the assumption that the volume of planning and repair work in the USSR will have significantly increased by 2000. Mastering that volume, as well as meeting the growing demands for raising the level of public amenities for housing and the adjacent sites, will require fundamental improvement in planning and carrying out housing capital repair.

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KAZAKH GOSSTROY CHAIRMAN ON CONSTRUCTION PROBLEMS

Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 19 Jan 82 p 2

[Article by A. Bektemisov, chairman of Gosstroy Kazakh SSR: "Improve the Plans"]

[Text] The 26th congress determined that a fundamental task of capital construction is increasing the production potential of the country on a new technical basis, erecting new housing and facilities for municipal-consumer and social use. In this connection, many tasks were set which would have to be solved by builders at a much higher level.

It is no accident that at the November (1981) Plenum of the CPSU Central Committee the most pressing questions of economic construction and ways of solving them were disclosed with party adherence to principle. Special attention was directed to the need of achieving a higher efficiency of production and observance of the strictest possible regime of economy in the use of all forms of resources. The decisions of the Plenum, theses and conclusions contained in the speech delivered there by L.I. Brezhnev will play an important role in the fulfillment of the State Plan of Economic and Social Development of the USSR for the 11th Five-Year Period and for the 1982 national-economic plan approved by the sixth session of the USSR Supreme Soviet.

It should be noted that during the years of the 10th Five-Year Plan capital investment in the national economy of the republic amounted to 33.4 billion rubles, which is significantly more than during the preceding five-year plan. Special attention was concentrated on the start-up of capacities and facilities in ferrous and nonferrous metallurgy, machine building, coal, petroleum, chemical, food and light industry and on facilities of housing and cultural-consumer use.

Major tasks have been set before us in the 11th Five-Year Plan. Approximately 38 billion rubles of capital investment have been allocated for the national economy of the republic.

Their effective use depends to a significant degree on the work of the many-thousand army of planners.

Thus during the past five-year plan there were developed 12 schemes of general plans of industrial centers and schemes for regulation of industrial construction, uniting 258 enterprises of different sectors with a total estimated cost of

1.7 billion rubles. At the present time all oblasts and 193 administrative rayons are provided with schemes and drafts of plans; purposeful work is continuing on the development and correction of general plans of cities.

Much attention is being given to the elaboration of model plans of civil housing type. A total of 283 model projects has been developed providing for the latest achievements of science and advanced technology; considerable work has also been done on the revision of previously approved plans for the purpose of reducing estimated cost, material intensiveness (especially of metal) and the expenditure of fuel and power resources through the introduction of more efficient volume-planning and design solutions and the elimination of extravagances and other measures. But as a whole, the organization of planning and research work still lags behind the tasks set by the 26th CPSU Congress.

Despite the constant growth of the volume of corresponding work, many construction projects nonetheless have been carried out on the basis of unfinished and unapproved plans. At the same time, there has been a sharp growth in the number of planners who are not used in construction. On the average, each third one of them has not been put to work. Thus, at the beginning of the current year, the Kazakh SSR Ministry of Consumer Services possessed documentation on the construction of 108 facilities with an estimated cost of 46 million rubles, which created a four-year reserve. Naturally, under such conditions most of the plans become obsolete and require reworking, while the money spent on them—more than one million rubles —is just wasted. A similar situation exists at the Ministry of Motor Highways, the Ministry of Housing and Municipal services and at other ministries and departments.

For this reason, planning and research work plans were deprived of reliable long-term developments and turned out to be unstable. Thus the work regularity of planning organizations was upset, the normal technology of planning was not adhered to, and a situation of crash work was frequently created, leading to lower plan quality.

In this connection, it would be fitting to note that this year ministries and departments were not provided targets and initial data by the planning organizations of Gosstroy in the amount of 12 million rubles, and financing was not opened for 22 million rubles. This particularly applies to the Ministry of Motor Transport, the Ministry of Education, the Ministry of Housing and Municipal Services, the Ministry of Agriculture, the State Committee for Selkhoztekhnika and the Alma Atinskaya, Dzhambulskaya and Severo-Kazakhstanskaya oblispolkoms. It should not be forgotten that beginning with 1982 facilities whose construction has not been confirmed by five-year plans will not be accepted for planning and those lacking title lists--for credit extension.

Of course, defects in planning work do not boil down simply to questions of its organization. And the technical and economic level of many plans remains still unsatisfactory. Scientific-technical achievements and advanced experienced are far from always used in them. An example of this is to be found in the plans of silicate-brick plants in Ural'sk and Kzyl-Orda worked out by the NIIstromproyekt Institute. While going into operation in 1976-1977, the plants still have not reached their planned capacity as a result of committed blunders and mistakes. Because of their partial utilization, they are short 600 million bricks.

It is enough to say that on the basis of the stated and other reasons, of the 964 plans and technical and economic substantiations with a total estimated cost of 3.6 billion rubles, 426 were returned for further improvement or partial refusal. It is necessary to point out that even in many recommended and approved plans and technical and economic substantiations there were irrational solutions and errors whose rectification in the process of examination made it possible to reduce the estimated cost by 120.4 million rubles.

An effective way of improving the quality of construction and its industrialization as well as reducing planning time is typification of plan solutions. But serious defects still exist in this field. A number of model plans are still in effect with low technical and economic indicators, nonoptimal planning parameters and uneconomical designs. The stock of model plans is slow in being corrected or renewed.

A significant flaw in planning and estimating work is unreliable determination of the estimated cost of construction. During the years of the 10th Five-Year Plan and 9 months of 1981, Gosplan and Gosstroy Kazakh SSR were obliged to correlate increased estimated costs for 57 previously approved plans amounting to an average of 15 percent above their initial cost. A significant portion of the cost rises was the consequence of blunders and mistakes made by planning organizations as well as the low level of planning esimate discipline.

Serious oversights were found in plans that had passed through departmental examination and had been approved by ministries, departments and ispolkoms. During the years of the 10th Five-Year Plan, the republic Gosstroy as a form of selective check examined 350 plans; of these 238 were returned for further development. At the same time, the possibility was disclosed of reducing the cost by more than 6 percent and curtailing the expenditure of basic materials. Particularly many violations were found in plans approved by the Ministry of Local Industry, the Ministry of Consumer Services, the Ministry of Agriculture and the Ministry of Motor transport of the republic.

Considering that the indicated defects are to be found in the plans of all checked institutes and clients, there is reason to believe that excesses and mistakes in the planning of enterprises, buildings and structures cost many tens of millions of rubles, thousands of tons of metal, cement and other material resources. The struggle with these excesses and violations constitutes a big reserve of planners for the fulfillment of targets of lowering price and reducing the material intensiveness of construction.

Attaching an especially important value to the quality of planning in the 11th Five-Year Plan and subsequent years, the CPSU Central Committee and the USSR Council of Ministers adopted a special decree "On Improving Planning and Estimate Work."

The solution of this important task will make it possible to improve the technological structure of capital investment in the 11th Five-Year Plan and to reduce the relative share of construction and installation work in the total volume of capital investment to 51 percent versus 54 percent in the past five-year plan.

A new manner of evaluating the operational activity of planning and research organizations in regard to the turning over of completely finished documentation accepted by clients obliges ministries and departments to raise the level of supervision over subordinate organizations, to strengthen control over the rational utilization of funds for planning work, to ensure the active participation of collectives in the all-union and republic socialist competition and to direct them to the solution of the forced targets of the 11th Five-Year Plan.

The duty of planners is to fully utilize the new opportunities granted them by the party and the government, to provide construction projects of the 11th Five-Year Plan with modern and economical plans and to promote thereby the forward movement of our country and republic along the path of technical, economic and social progress.

We believe that the republic's ministries and departments, collectives of planning, research and scientific-research organizations will apply all their efforts to the solution of the tasks set by the 26th CPSU Congress in the field of capital construction and planning and estimate work.

7697
CSO: 1830/228

BUILDING MATERIALS

NEED STRESSED FOR ECONOMY OF BUILDING MATERIALS

Moscow MOSKOVSKAYA PRAVDA in Russian 9 Sep 81 p 1

[Article-editorial: "Build Economically"]

> [Text] To insure the most rational use of material, labor, and financial resources as the most important condition for improving the balance of national economic development, creation of necessary reserves, and the attainment of high end results.
>
> (From "Basic Directions for Economic and Social Development of the USSR for 1981-1985 and for the Period to 1990")

Efficiency experts of the "Mosstroy" No 8 trust recommended substituting pre-fab reinforced concrete troughs and using inventory metal forms instead of one-time in place of slab channels in industrial pipelines, the installation of which would have required a greater quantity of metal. This permitted a reduction of the labor requirements for work and to accelerate the term of completion, and to save great amounts of steel, cement and other materials.

Specialists from "Mosstroy" No 28 constructed new metal forms for the improvement of column joints which enabled finishing operations to be reduced to a minimum, to improve stability of the joints, and to save considerable high-grade cement. Many bricks and much mortar and cement are saved by pre-assembled structural partitions made from gypsum, which the trust is attempting to replace traditional brick partitions with. Advanced acrylic-concrete floors have provided a considerable savings at trust construction sites in concrete and ceramic tiles...

Dozens of other locations of such advanced know-how can be named for Moscow workers in construction. The glorious brigades of Heroes of Socialist Labor, CPSU 26th Congress delegates A.A. Gromov from "Moszhilstroy", I.P. Demin from DSK-3, V.A. Zatvornitskiy from "Mosstroy" No 1, N.A. Panin from "Mosfundamentstroy" No 2, A.M. Surovtsev from DSK-1, A.S. Sukhanov from Mosmetrostroy, and many, many others have long been exemplary true masters of the project, skillfully and economically expending valuable construction materials, and finding new reserves for economizing in material and labor expenditures. The capital has amassed great positive know-how in the lowering of costs for construction projects while improving quality at the same time.

Much has been done and much has been achieved, but the demands for the work of the builders continue to grow. The CPSU 26th Congress ratified as one of the most important principles of economic strategy proposed by the party for the period: the economy must be economical. This principle must be the guiding principle in the activities of each construction organization, each construction industry plant, and each participant in the municipal construction assembly line. The expanded program of operations in this direction was issued in the resolution of the CPSU Central Committee and USSR Council of Ministers "On Intensifying Work to Economize and Rational Use of Raw-materials, Fuel-energy and Other Material Resources". As noted in it, it is now mandatory to "...achieve a decisive turning point in all planning and management operations, the development of science and technology toward more efficient use and economy of material resources".

One of the most promising, effective ways to intensify the national economy overall, and capital investments in particular, was pointed out in the CPSU CC resolution "On the Initiative of Collectives of a Number of Moscow City Enterprises for the Widespread Use of Scientific and Technological Achievements to Insure Economy of Labor, Material, and Power Resources". On this path await great reserves promising the economy great savings, accelerated, and less expensive construction--those reserves available to enthusiasts, people of inquisitive nature and business like approach.

There are many examples. In the "Mosmetallokonstruktsiya" association, a shop has been constructed for light wall parts; they are considerably larger than the concrete parts, and weigh one-tenth as much. Their use permits reducing the labor expenditure of installers, reduces the weight of the building by thousands of tons, and saves great quantities of construction materials. Unfortunately, numerous buyers and planning institutes have not evaluated these advanced structures as they should, and continue to work up documentation based upon obsolete designs. As a result, a large part of these units go outside the capital.

In the construction of service tunnels, the on-site cast pressed-concrete lining has shown itself to be efficient instead of pre-cast: it does not require metal, saves great amounts of concrete and cement and reduces labor expenditures by half. The installation cost of such lining is one-half to one-third that of traditional linings. Unfortunately, Glavmosinzhstroy utilizes the novelty weakly.

The construction sites of our city require great amounts of metal. But is this metal always expended rationally? Facts indicate the opposite is true. In the construction of engineering structures, steel pipes must to a greater degree be replaced by reinforced concrete stand pipes. This is a considerable reserve for the reduction of metal use. However, the Moscow Reinforced Concrete Pipe Plant produces these pipes with a diameter in excess of 700 mm in one-half the quantity as established by the appropriate decisions. As a result, hundreds of tons of metal are over-expended. Thousands of tons, it may be said are buried to no purpose in the ground due to the fact that enterprises from USSR Minchermet deliver to the Moscow sites pipes of large diameter with wall thicknesses exceeding those required. Substituting plastic pipes for steel in the construction of water and sewer system networks would permit the saving of 6,000 tons of metal during the current year. But this is just the beginning of a great progressive reconstruction.

At one time, Glavmosinzhstroy developed and patented an innovation--the mobile metal (self-advancing) support (hemi-shield) for the construction of underground lines by the open method. This innovation recommended itself at several sites of the main administration, but has not been used at all for more than two years. Moreover, the use of these supports at just half of the sites earmarked for construction during the 11th Five-Year Plan would yield a savings of 120,000 tons of metal and 12 million rubles, and would speed the construction of underground service lines.

The "bread" of the construction sites is cement. Approximately 8,000 tons would be saved during the current year through the use at enterprises of Glavmospromstroymaterialov of ash and slag from Moscow TETs [Thermal Electric Central]. This is a considerable reserve. But here are the figures: for this, 140,000 tons of slag will be used, but the TETs of the city produce hundreds of thousands of tons of this slag annually, and millions of tons already lie in dumps. It appears that USSR Minenergo has reached the point where it must change its policy in this matter of importance, and not demand from municipal authorities new land for ash dumps, but to set up power concentration systems for the slag and provide it to the construction industry. The interests of the national economy require this.

The streets of our vast city must be in good condition to pass the flow of vehicular transport. In the repair process, each year huge quantities of bituminous concrete are laid on the roadways. There are streets where the thickness of the asphalt layer exceeds a half meter. This however, does not affect the quality of the cover: the new layer of asphalt repeats the unevenness of the old. It would be considerably wiser to remove the old, spent bituminous cement, and lay new asphalt in its place, re-cycling the old and putting it back into use. The city now has only one functioning re-cycling facility, with a capacity one-fifth of that required. But widespread use in road construction of re-cycled asphalt would permit a savings in the five-year plan of up to a half million tons of asphalt materials, including up to 25,000 tons of bitumen, 230,000 cubic meters of gravel, and 75,000 cubic meters of sand, the transport of which would require 160-180 railroad units. Glavmosinzhstroy and Glavmosdorupravleniye must accelerate the construction of such facilities.

Large reserves for the economy of raw-materials, supplies, and energy exist at every construction site, each association, trust, construction administration, and in every brigade. Economic management, unfortunately, in a large number of collectives has not yet become a primary condition for socialist competition. The quotas for savings in resources, particularly in sectors and brigades, while always specific, frequently are not supported by calculations and organization mechanization resources. It is necessary to bring to every worker in graphic form the standards for material expenditure, for energy and other resources. It must be achieved that each worker has a precise, specific task for saving material resources both for the five-year plan and each individual year, quarter, month, and shift. The role in this is major for party committees and primary political organizations at the site. There is ample space here for engineering and economic search.

A tested reserve of assiduous, skilled management is the brigade contract. A brigade concluding an agreement with the administration for a contract, generally speaking, builds more quickly and more productively, and saves considerable construction materials. The Zlobinsk method must be more persistently implemented at construction sites. Unfortunately, there are many cases where the brigades, disinterested economically in the careful expenditure of materials, permit damage and loss. One can freqently see broken bricks and glass at sites, and discarded reinforced concrete articles and pipe, burning in packing material bonfires, including wood. Party organizations and site supervisors must be resolute regarding such instances of neglect.

A comprehensive savings of materials, energy, of labor expenditures, the search for new reserves, and a persistent desire to put them to serving the national economy--this is today the criterion of maturity for every worker, no matter who that worker may be--from the worker to the highest ranking supervisor or manager. Party committees and site managers must involve in this important matter the entire aktiv and all public organizations to organize a campaign for thrift at every construction project. Each builder must be on guard for the national welfare. A reliable barrier must be erected against losses.

8851
CSO: 1821/049

COST, SUPPLY OF CONSTRUCTION MATERIALS DISCUSSED

Moscow FINANSY SSSR in Russian No 7, Jul 81 (signed to press 15 Jun 81) pp 37-41

[Article by Candidate, Economic Sciences, M.P. Berezina: "Improving Credit Procedures of Procurement Organizations"]

[Text] Increasing the level of industrialization for construction production over the past decade has facilitated the development of a progressive form of material-technical supply for contractor organizations, that of production-technological unitized supply of construction projects. A system has evolved of specialized organizations, the so-called unitized supply trusts, industrial procurement trusts (associations, production-technological unitized supply administrations--UPTK), charged with accomplishing the supply and unitized procurement of material values in the appropriate management link (ministry, all-union production construction-installation association, trust).

The establishment of these organizations is a natural stage in the matching of construction production with factory-plant production, inasmuch as it is through them that industrial enterprises manufacturing building structures and parts operate in a unified flow or line with construction-installation organizations, erecting buildings and structures "off the wheels" from re-inforced pre-fabricated structural elements. In those areas where unitized delivery is organized as it should be (Estonia, Moldavia, Leningrad, Krasnoyarsk, Vladimir), an automated control system has been implemented for this type of delivery.

The considerable role of procurement organizations must also be noted in the additional involvement of above-norm and surplus commodity-material values in economic circulation. Fulfilling the functions of capital-holder (intermediate supply organization), they are obliged to reduce funds for organizations having surplus material stocks, and to identify unneeded values (materials) in other organizations for redistribution to those requiring them. Introduction of the unitized supply system for construction projects promotes a timely engineering preparation of the site for construction, and reduces material stocks and structural elements on hand for contracting organizations.

As the result of changes in the organization of material-technical support for the construction industry, new subjects and objects of credit have come into being. The production-technological unitized supply organizations listed have become credit subjects. Their organizational forms and bases of operations (tasks, functions, chief operational indicators), relationships of industrial, procurement-supply, and construction organizations, and the procedure for calculating deliveries of unitized supply of structures and parts are governed by recommendations developed in 1977 by USSR Gostroy, USSR Stroybank, and the USSR Gosbank regarding the organization and procedure for payment of unitized deliveries of construction structural elements and parts. In accordance with those recommendations, ministries and departments were obliged to convert during the period 1977-78 to unitized delivery of construction structural elements and parts for construction projects. However, overall, the developmental level throughout the sector for unitized delivery systems is now only 46%*.

Objects of credit are determined by such functions of organizations reviewed as unitized provision of structural elements, articles, materials (including local construction materials, which constitute over 50% of the cost of all material resources required by the sector), and projections for unitized deliveries. The primary evaluative indicator of operations is the volume of unitized deliveries effected, including to sites and complexes scheduled to go on line which are being completed in the planning year. In the overall volume for unitized supply organizations, the main item is delivery without participation in settlement, then direct delivery with participation in settlement, and finally, delivery-supply from warehouses or bases (warehouse commodity turnover). The latter two forms of delivery create a necessity for working capital. Thus, in conducting warehouse operations: supply of articles and parts for direct use in the construction process, in increasing the level of plant readiness, and the formulation of sets, there arises a requirement for investing capital in structural element, unit, and materials stocks in warehouses.

These stocks are designed for subsequent delivery and are reflected for procurement and supply organizations accounting for their operations on the contracting balance as production. If the organizations account for their operations on the supply-sales balance, they are reflected as commodity stocks or reserves. It is characteristic that the consolidated items of working capital indicated frequently predominate in the structure of standardized working capital of supply-procurement organizations.

The object of credit in this instance are above norm production stocks or commodity stocks. For those organizations having a supply-sale balance, the object of credit is likewise a part of the standard for commodity stocks (up to 65%), inasmuch as in accordance with the established procedure, standards for commodity stocks are formulated by means of individual working capital on a scale of not less than 35%. Accounting for operations on the contracting organization balance, the UPTK of construction trusts and individual unitized supply trusts are provided their own working capital for stocks of commodity-material values on a standardized scale.

Direct supply operations with participation in settlements in organizations employing the unitized supply system for structural elements and parts to construction sites are tied to deliveries of production sets. The latter consist of a set of structural elements, parts, and materials for construction of the project or the fulfillment of a stage of work, and are constituted on the basis of an order and schedule for unitized supply. To insure timeliness for deliveries of structural elements and parts based upon unitized supply schedules, production engineering, and deadlines for the accomplishment of construction-installation work, contractor (plant) sets are identified as components of the complete production set. The contractor (plant) set is delivered to the site from one plant-manufacturer or production-supply base of the UPTK.

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* See: V.A. Spektor, "Novyy Etap v Razvitii Sistem Snabzheniya i Komplektatsii Stroyek" [A New Stage In The Development Of Supply And Procurement For Construction Projects], Ekonomika Stroitel'stva, 1980, No 12, p 23.

Organizing the delivery of plant sets on term is the responsibility of the supply organization, which pays each plant the cost of the set after complete delivery of all component elements and parts to the construction site or the UPTK base. The cost of the production set is reimbursed to the supply organization of the construction-installation organization (or the UPTK) after completion of deliveries by all enterprises. In accordance with such a system for settlement, the supply organization makes funds available to cover expenses associated with the delivery of production sets, from the time of payment to the initial contract (plant) enterprise until the presentation of request for payment by the construction organization for the full cost of the production set. Sources for the formation of working capital are both bank credits and individual [organization] capital.

There remain many unresolved problems in the economy, crediting, and settlement systems for unitized supply organizations which in turn delay the development of a progressive form of material-technical supply. We have already stated that the unitized supply system has yet to be implemented in all areas, and where it is now employed, only half of all deliveries are involved, whereas it should be no less than 75%. In conjunction with this, the indicator for unitized-supply deliveries effected is not the main item for many supply organizations.

Interest is still lacking on the part of industrial enterprises and supply organizations in unitized-supply deliveries. Many plants ship items individually, out of set, or "loose", receiving payment for those items and at the same time ensuring fulfillment of the sales plan. At the same time, contractor organizations build up reserves of individually delivered structural elements and parts which cannot be placed in use. It therefore appears expeditious first, to strengthen bank control over settlements for unitized-supply deliveries and to prohibit single item payments, and second, to change the accounting system for material values delivered individually by the contractor organizations: to consider them as output items-production remaining in responsible custody, i.e., outside the balance. Supply organizations or industrial enterprises (if the non-unitized delivery occurred through their fault), must consider those values on the balance, so as to increase the responsibility of those organizations for above-plan reserves of values, non-fulfillment of unitized delivery plans, non-production expenditures, and disruption of construction deadlines.

The problem area of credit-settlement servicing for these organizations still has not been organized; a significant part of which are open accounts in Gosbank institutions, whereas construction organizations are serviced by Stroybank institutions. As a result, the requisite control is not provided by the banks over the efficiency of organization for unitized-supply deliveries. It is apparent that examination of the question regarding organization of credit-settlement services for unitized-supply organizations has merit.

Widespread settlements for the delivery of materials in the form of planned payments by construction organizations to unitized-supply organizations and subsequent enterprises are accomplished through the future deliveries account, and final settlements are made after the delivery of the set. Here, advance payments are freqently made to the unitized-supply organizations, which reduces their responsibility for rational material-technical provision appropriate to the production process of construction. It should be noted that the recommendations cited above of Gosstroy, Stroybank, and Gosbank provided for an acceptance form of settlement, which is more efficient than planned payments.

Unity is absent in the organizational-structural forms of unitized-supply organizations. The recommendations permit a divergence of operational profiles for those organizations: supply, industry, construction, and for those indicated types, in primary plan indicators and reporting balances. This does not provide unity in the management of these organizations, the interests of which gravitate toward the established operational profile to the detriment of fulfilling the plan for unitized deliveries. For example, many contractor organizations of the Turkmen SSR Minstroy [Ministry of Construction] in 1980 had large above-plan non-credited stocks of material values due to non-unitized deliveries, whereas the Stroyindustriya trust in carrying out unitized delivery of parts and reporting its operations on the industrial balance, evidenced incomplete standards for the balance item, "Finished Output". From this, it is obvious that, on the basis of the operational nature of the supply organization, i.e., purchase and sale of values, that they should be predominantly supply-sales organizations and have the appropriate accounting balance for that profile.

Analysis indicates that the majority of supply organizations is not provided with individual working capital to cover expenses associated with deliveries of production sets. What is more, in the industrial and supply-sales balances of contractor organizations, there is no item which would reflect the economic nature of assets available to cover the expenditures indicated: in the first two, they are shown in the item "Goods shipped, the settlement documentation for which has not been transferred to the bank for collection", and in the third, in the item "Monetary Assets". A system of scientifically founded standards for working capital for supply organizations has yet to be developed.

The existing procedure for crediting supply organizations poorly reflects the peculiarities of progressive forms of material-technical supply for the construction industry and as a result, does not promote an efficient bank control over the activities of these organizations, or their fulfillment of the plan for unitized deliveries. As a rule, Gosbank credits these organizations according to commodity turnover by a special loan account, and Stroybank--for balances of above-standard commodity stocks or reserves (by simple loan accounts), similar to the crediting of contractor organizations for production stocks, and also participates in the formation of 65% of the standard of commodity stocks. However, the primary form of credit, the allocation of payment credits, is chiefly credit for the payment of bills for commodity-material values. Here, absolutely no consideration is given to specifics relating to the circulation of working capital for these organizations receiving advance payments for the supply period.

In accordance with the established procedure, Stroybank institutions accept for credit stocks of commodity-material values the expenditures of supply organizations which are associated with the delivery of production sets. Actually, credit is allocated for those expenditures earlier paid in advance through payment credits, or not issued at all if their source is a credit debt for direct deliveries. The procedure for crediting supply organizations for the payment of bills for commodity-material values in practice is an inferior version of credit by commodity turnover, as here there is no provision for bank control over fulfillment of the plan and organizations pay unjustifiably high percentage of interest for the use of such credit which is considered non-plan*.

The multi-echelon nature of construction industry management leads to an increased demand for payment credits. The conversion of the industry to the two-three echelon management system as envisaged by the resolution of the CPSU Central Committee and USSR Council of Ministers dated 12 July 1979 is being accomplished slowly. Currently an unfounded high number of echelons is involved in settlements for material values: the supply trust assigned to the Main Administration [glavk], the UPTK of the construction trust, and the primary construction organization. A substantial number of contractor organizations are insolvent, which causes procurement and supply organizations purchasing material values for them considerable financial difficulties. As a result, payment credits are returned by many organizations in less than timely fashion, and correspondingly, credit issued at elevated interest is used.

Individual UPTK are participants in permanently in force settlements through OVR, BVR which systematically are not concluded, which in turn result in the UPTK not having assets to cover the payment credit. Moreover, in a number of cases, the UPTK are late in issuing bills for commodity-material values produced and allocated to construction sub-elements. For example, the UPTK of the Vil'nyusstroy trust on the average received 1.8--1.9 million rubles per month last year. This was equivalent virtually to the defaulted debt for goods shipped to construction sub-elements due to late issuance of bills.

In March 1980, the UPTK of the Yuzhuralelevatorstroy shipped 900,000 rubles of materials, but presented a bill during this period to the bank for only 500,000 rubles. The Kurskzhilstroy trust UPTK during the first six months of 1980 was issued loans for the payment of suppliers' bills, 3 million rubles, including a loan account of 1.2 million rubles at elevated interest rates. During this period, only 0.2 million rubles were paid, and 1.4 million rubles were transferred to the defaulted loan account. The UPTK is a participant in settlements via the BVR. As of 1 July 1980, as the result of insolvency on the part of customers, the debt of the BVR to the administration amounted to 2.3 million rubles.

Other facts attest to the substitution of payment credits for plan directed credits for commodity-material values in supply organizations. The UPTK of Mosoblinzhstroy 1 was issued during the period January-August 1980 4.2 million rubles in payment credits, 2.4 million at elevated interest rates. Debt on the indicated account as of 20 September 1980 was 0.8 million, or 8% of the indebtedness recorded by the Moscow Oblast office of Stroybank for payment credits issued at elevated rates. The UPTK possessed credit for above-standard material stocks based upon the limit of 100,000 rubles allocated for the II--III quarters, comprising 10% of the limit established for the trust. The Mosoblspetsstroy-4 trust UPTK also was issued for 8 months of 1980 credit payments of 4 million rubles, 2.5 million of which was at elevated percentages. For 1980, the UPTK was given a limit of credit for above-standard stocks of commodity-material values of 200,000 rubles, or less than 9% of the trust's limit.

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* The analysis of turnover for loan accounts for supply organizations is the basis for the conclusion. The primary total of bills for commodity-material values is paid with payment credits. The latter are paid through a great part of the proceeds of these organizations, which are preliminarily entered in the current accounts of the supply organizations.

From that noted above, it follows that it is necessary to re-organize the credit system for supply organizations. The basis must be, in our view, a procedure for credit by commodity turnover as used by Gosbank for supply-sales organizations. Coordination must be insured for that credit procedure, specifically regulation and checking of provision for loan indebtedness, with fulfillment of the plan for warehouse commodity turnover and for unitized deliveries. As an incentive to reduce reserves for construction organizations, it makes sense to provide credit for the purchase of their surplus, unneeded values.

Improving the financing-credit mechanism for supply organizations presupposes also consolidating the differentiated mode of credit and settlement. It would be expeditious to eliminate uncoordination in planning and the evaluation of operations for construction industry procurement and supply organizations, and to provide criteria in the form of indicators closely tied to tasks relating to introduction of production capacities and sites and growth of labor productivity.

It is important also to consider the participation of the supply organizations in the fulfillment of tasks in involving in economic circulation the material values by the construction sub-element overall. Here, the initiative must proceed upon improving the management structure, development of production construction-installation associations, which include construction and installation administrations, enterprises of the construction industry, supply, procurement, and transportation organizations. Production stocks are allocated among several echelons of the association. At the present time, a great disproportion is observable in this allocation. For example, in the five eastern Main Administrations of the country, Glavkrasnoyarskstroy, Bratskgestroy, Glavvostokstroy, Glavdal'stroy, and Glavvladivostokstroy, reserves in enterprises of the construction industry over the past 10 years are growing one-eleventh as fast than in construction organizations where 81.3% of all resources are concentrated. In the opinion of certain economists, it is necessary to redistribute standards for individual working capital in favor of industrial operations with the goal of putting right the process of unitized delivery, and also increasing the credit quota.

The realization of the proposals described might increase the efficiency of financial and banking control in the area of material-technical supply of construction.

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BUILDING MATERIALS

UNUSED RESERVES FOR SAVING BUILDING MATERIALS

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 10, 1981 (signed to press 5 Oct 81) pp 3-8

[Article by USSR Gossnab Deputy Chairman N. Arkhipets: "Economy Reserves in Capital Construction"]

[Text] The CPSU Central Committee Accountability Report to the 26th Party Congress notes that reducing the materials-intensiveness of output and the economical expenditure of raw material, fuel, energy, metal, cement and other materials will acquire especially important significance in our economic development in the current five-year plan. The CPSU Central Committee and USSR Council of Ministers Decree "On Intensifying Work on the Economical and Efficient Use of Raw Material, Fuel, Energy and Other Material Resources" is oriented toward resolving these tasks.

By consuming about a fourth of the national income, the construction branch exerts a considerable influence on the effectiveness of all social production. The efficient, economical use of material resources in construction depends on many factors of a socioeconomic, organizational, technical and psychological nature. Examining all factors and directions of saving material resources and interlinking them on the basis of a systematic methodology represent a complex, comprehensive task.

In order to more fully understand the scope of consumption of material resources in construction, the following data should suffice. In the current five-year plan, construction will annually use more than 70 percent of the cement produced in the country, 20 percent of the rolled metal, 16 percent of the lumber, 40 percent of the glass, 42 percent of the slate, 55 percent of the soft roofing and quite a bit of other materials.

Carrying out the construction work program requires of many links of the economic mechanism, and first of all of material-technical supply agencies, the skillful, efficient use of the financial and material-technical resources being allocated for this special branch of production in the country's national economic system.

In order to realistically evaluate the potential opportunities for saving materials in construction, workers in planning-design and scientific research institutes and Gossnab specialists have, with the participation of the construction ministries and departments, made calculations and proposals on saving materials in construction in the 11th Five-Year Plan. According to these calculations, for example, the potentially possible savings in rolled ferrous metals in construction might reach 9.1

percent and cement more than 10 percent, which will ensure fulfillment and overfulfillment of the assignments set by the "Basic Directions."

A nationwide analysis of cement consumption helped us determine the reasons for overexpenditures and outline the basic feasible ways of saving cement. Now, as in preceding years, the highest losses of cement occur due to the inefficient use of individual types of cement, using substandard concrete and slurry aggregates, defects in the production of prefabricated reinforced concrete components, insufficient use of plasticizers and chemical additives, and other factors. The analysis showed that only about 10 percent of the commercial concrete and slurry plant batching installations operate automatically. In this connection, the amount of cement needed to produce concrete and slurries which is used in construction is two- to three-percent higher than is anticipated by the norms. The level of steamer automation at enterprises producing prefabricated reinforced concrete components is currently 27 percent. This leads to losses of 1 to 1.5 percent of the cement and 840,000 tons of conventional fuel. Just eliminating these losses would permit an actual savings of six percent, with practically no additional capital investment.

Significant losses of cement also occur in transport, storage in ill-suited premises, mixing different brands of cement, unnecessary transshipment, and shortcomings in material-technical supply organization. Total losses for these reasons are more than four percent. Workers of the Soyuzglavtsement can and must exert an appreciable influence on eliminating these losses by putting forward appropriate suggestions to the construction ministries and organizations for review and decision.

As selective checks have shown, there are substantial shortcomings in the work of construction organizations and territorial agencies of the USSR Gossnab system and supplier enterprises in rate-setting, in the storage and use of material resources, and in supplying them in amounts and assortments conforming to job authorizations and agreements.

Thus, a check of "Khar'kovzhilstroy" combine by USSR Gossnab workers showed that its enterprises permitted the following overexpenditures of material resources per million rubles in estimated construction-installation work cost last year: rolled metal -- 21 percent, cement -- 14.9 percent. A similar overexpenditure is also occurring this year. The basic reason for the overexpenditure of ferrous metals is the replacement of some types of shapes by other, heavier sections, the failure to supply efficient types of steel, the release of defective output, and inadequate introduction of waste-free technology for producing reinforcing framework. Some 4,110 tons of rolled metal was overspent last year here for this reason.

At a number of combine enterprises, norms have not been established for cement expenditure this year; sand contaminated by slimy and clay impurities and an impermissible coarseness modulus is being used to manufacture cement mixes, leading to a 10-percent overexpenditure of cement.

Serious violations are being permitted in reporting. For a majority of building materials, expenditure data do not agree for statistical reports 20-sn and 2-sn.

Combine enterprises do not have railroad scales and do not monitor incoming cement. Sample checks showed that cement underloading was at least three tons in each railroad car.

Losses of cement due to the use of poor-quality aggregates, mixing brands of cement, inadequate loading and unloading mechanization and the use of high-grade cements when manufacturing low-grade concretes have been high at enterprises of the BSSR Ministry of Industrial Construction. Losses due to defects in producing cement-based components and materials are 0.5 percent in the republic. All types of losses considered, Belorussian builders use nine percent too much cement annually.

Only a lack of proper monitoring on the part of construction ministries and territorial agencies of the USSR Gossnab system can explain the fact that such construction ministries as the USSR Ministry of Construction of Heavy Industry Enterprises, USSR Ministry of Industrial Construction and USSR Ministry of Construction permitted an overexpenditure of cement in the 10th Five-Year Plan, instead of a savings.

Thus, the actual cement expenditure per million rubles of construction-installation work in 1980 exceeded the normative expenditure by 6.4 percent, or by 635,000 tons, for the USSR Ministry of Construction of Heavy Industry Enterprises. Instead of the planned savings of 690,000 tons in 1980, the USSR Ministry of Industrial Construction used 296,000 tons more. Instead of saving 553,000 tons, the USSR Ministry of Construction used 206,000 tons more than the normative.

At the same time, checks have shown that construction organizations and enterprises of the indicated ministries have large unused opportunities for ensuring fulfillment of the established cement-savings assignments. For example, losses and inefficient expenditures of cement during the first nine months of 1980 at enterprises of the USSR Ministry of Construction of Heavy Industry Enterprises' Glavsreduralstroy were 51,000 tons, including 17,000 tons due to inflated production expenditure norms, 4,000 tons due to write-offs of above-norm transport losses, 7,000 tons due to the failure to use plasticized additives in concretes and slurries, and 1,500 tons due to the diversion of resources to nonfunded distribution.

Building materials losses have also been high at "Khar'kovpromstroy" combine (UkSSR Ministry of Industrial Construction) and "Zhdanovstroy" combine (UkSSR Ministry of Construction of Heavy Industry Enterprises). Steps are currently being developed and implemented to eliminate them.

Jointly with a number of republic construction ministries, the Moldavian SSR Gossnab has checked window glass protection during production and transport. The results of these checks showed that Gomel'skiy, Lisichanskiy and Konstantinovskiy Glass Plant imeni Oktyabr'skaya Revolyutsiya and Saratov Commercial Glass Plant are not displaying a proprietary concern for protecting output during packaging and shipping, leading to significant above-normative losses.

It has been established that glass breakage in containers fluctuates between 9.8 percent (Konstantinovskiy Plant imeni Oktyabr'skaya Revolyutsiya) and 20 percent (Saratov Commercial Glass Plant), and in crates -- between 12 percent (Gomel'skiy Glass Plant) and 36-42 percent (Konstantinovskiy and Saratov plants). Manufacturing enterprises are also to blame for the fact that breakage exceeding permissible limits is generated during transport in special containers and plank crates.

There are significant economy reserves in the production, distribution and consumption of metal output. A study of rolled ferrous metal orders for 25 Belorussian Ministry of Industrial Construction trusts showed that general contractor organizations changed their own orders from the previously planned products list, in view of which upwards of 8,000 tons of some types of rolled ferrous metals were eliminated and they claimed a demand for about 7,000 tons of other types. These changes were made after the orders were drawn up, leading to inefficient substitutions and overexpenditures.

Quite often, the actual demand for rolled ferrous metals exceeds the planned demand. A sample check run at Belorussian construction organizations on 37 orders confirmed that the actual demand for rolled metal was 5.3 percent higher than that determined using initial builder calculations and orders. The additional rolled metal was not ordered promptly and the demand for it was met basically through inefficient substitutions.

Sample checks of the weight and linear characteristics of 8-16 mm reinforcing steel showed that, because the upper tolerances were exceeded during production, underdelivery of these reinforcing sections was 4.3 to 4.5 percent. According to BSSR Ministry of Industrial Construction calculation data, republic builders fail to receive 7,000-8,000 tons of reinforcing steel annually, or about five percent of the total demand. And underdeliveries of small types of rolled metal are about 15 percent.

Unsubstantiated decisions are often made in the process of drawing up orders about issuing job authorizations for delivering thick-wall large-diameter pipe. This has led to imbalance in the total demand for pipe, which the BSSR Ministry of Industrial Construction puts at more than 45 kilometers. In the process of actualizing pipe funds based on issued job authorizations, there was additional inefficient change in pipe specifications, causing a large overexpenditure of metal to be permitted.

A study of metallurgical enterprise notifications of the proposed substitution demonstrated their flagrantly categorical nature. Builders were therefore forced to take an assortment which was unnecessarily heavy.

Ferrous metallurgy enterprises, construction organizations and other consumers are currently deprived of the right to substitute rolled ferrous metal and pipe for less economical shapes without permission of USSR Gossnab agencies. It is very important that they work out effective forms of monitoring efficient deliveries of metal and actively use the rights granted them.

Consumer intake monitoring services must play a large role in organizing effective monitoring of metal products deliveries in precise accord with a products list conforming to contract specifications. To these ends, it would be appropriate to work out and approve a regulation on these services. The creation of consumer intake sample monitoring of the weight and geometric specifications of incoming rolled metal would not require significant expenditures. Construction organizations and subdivisions of territorial agencies of the USSR Gossnab system have every opportunity of ensuring the creation and successful operation of such services.

The system of statistical reporting and monitoring the proper use by construction organizations of the resources and equipment being allocated them requires further improvement.

USSR Gossnab territorial agencies often lack accurate, rapid information on the use of material resources in the region and, because of that, cannot perform the monitoring functions entrusted to them effectively. As is noted in the CPSU Central Committee and USSR Council of Ministers decree on strengthening economy procedures, the systems of recording, reporting, monitoring and running economic analyses of the proper and effective expenditure of raw and other materials, fuel and energy require further improvement. USSR Gossnab and Central Statistical Administration agencies are still faced with considerable work along this line.

Today, our system has planned and is in significant measure implementing measures to carry out the CPSU Central Committee and USSR Council of Ministers decree on perfecting the economic mechanism in terms of transferring construction projects included in the state capital construction plan to comprehensive material supply through territorial material-technical supply agencies on the basis of construction-installation organization orders according to their requirements as determined in conformity with the plans and estimates.

This year, this form of material-technical supply covers a total of 18.2 billion rubles worth of construction-installation work. And if consideration is given to the fact that everything necessary to put up housing, schools, children's preschool institutions, polyclinics and hospitals is being provided on a top-priority basis, this means comprehensive material-technical supply currently covers more than 50 percent of the total construction-installation work volume of about 1,010 trusts, associations and equivalent organizations.

Territorial agencies of the USSR Gossnab system now have available to them all the data necessary to successfully and continuously monitor the actualization of material resources by construction-installation organizations and individual large construction sites and projects.

With a view towards improving local work on organizing comprehensive construction supply and the economical, efficient use of available material resources, the USSR Gossnab is currently taking a number of steps. Many republic ministries, main territorial administrations and territorial construction and production construction association administrations have been transferred to supply on the basis of construction organization orders according to their requirements as determined by plans and estimates. In 1981, more than 900 construction projects have been allocated resources based on physical accounts through joint USSR Gossnab and contractor construction ministry orders. Special subdivisions have been created to organize construction supply in all union republic gossnabs and in the USSR Gossnab's main territorial administrations.

The USSR Gossnab has worked out and is implementing a system for monitoring the course of deliveries of material-technical resources for construction ministries and departments. An automated system for recording deliveries of materials for the most important, start-up construction projects is in operation. Each month, incoming local information permits the prompt elimination of deviations from planned deliveries and the resolution of other construction supply questions.

Gossnabs of the Ukraine, Latvia, Estonia, Turkmenia and the Volgo-Vyatskiy, Moscow, Central-Chernozem, Tatar, Khabarovsk, Vladivostok and other main territorial administrations are working hard to improve material-technical supply in construction and to use resources economically and efficiently. In these regions, construction project deliveries are made basically according to plans on the basis of 10-day period and daily schedules and in complete sets as agreed to by the builders.

It should be emphasized that the task today is for construction supply administrations and departments created in USSR Gossnab agencies to head up work on having construction organizations determine their materials requirements as determined in conformity with plans and estimates within the limits of the funds being allocated for established work volumes. They are obligated to play the role of coordinators of this work, as well as to exercise methods leadership through appropriate services.

The administrations and departments are also called upon to achieve development of the system of comprehensive, guaranteed supply to builders with consideration of balance in materials and items production plans and the orders of construction-installation organizations. This work will be facilitated by steps being taken by the USSR Gossnab to regulate deliveries to construction industry enterprises and construction sites on the basis of the amounts of carry-over rolled metal and other materials available to them.

The union republic gossnabs, territorial main administrations, soyuzglavsnabsbyts, and USSR Gossnab administrations and departments are faced in the 11th Five-Year Plan with big tasks in lowering materials-intensiveness in capital construction, determining actual expenditures of the most important building materials per million rubles of construction-installation work, and comparing that with requirements as defined by the plans and estimates. Successful resolution of this task will enable builders and material-technical supply agencies to manage the process of delivering resources and to maneuver inventories and materials flows.

It is very important that we continue improving reporting and recording the use of building materials in capital construction. The monthly project report on materials expenditure (form M-29) for construction sites must obviously now contain data for the entire construction period, as well as the normative materials expenditure (limit) for the project (complex) for the plan as a whole. Work on putting form M-29 reporting into proper order should be speeded up, as should recording actual expenditures of materials per million rubles in construction-installation work so that these data are comparable with the requirements as determined by plans and estimates. The deciding work in setting up this work belongs to agencies of the USSR Gosstroy system, the USSR Central Statistical Administration, and the ministries and departments. We need to accelerate the preparation of coordinated resolutions based on available proposals.

In accordance with the CPSU Central Committee and USSR Council of Ministers decree on perfecting the economic mechanism, USSR Gossnab territorial agencies must improve their monitoring of deliveries of materials and equipment to construction sites. We also should learn not only to monitor these deliveries in terms of ministry and department stocks, but also to control the movement of materials from supplier to consumer so as to ensure the prompt receipt and purposeful use of material-technical resources.

One feature of capital construction is that its materials-intensiveness and the economical and efficient use of material and labor resources in this branch depend not only on the delivery of particular materials in terms of quantity, assortment and time, but also on what materials are anticipated in the plan and on whether construction-installation work technology is followed. Construction ministry collectives are working on these questions. The joint efforts of USSR Gossnab territorial agencies and the union republic construction-installation organizations and territorial regions are creating conditions more favorable to carrying out the assignments of the current five-year plan.

Material-technical supply agency and construction organization workers should take into account the fact that the widespread introduction of brigade cost accounting forms following the method of Hero of Socialist Labor N. A. Zlobin's brigade and the actualization of a complex of measures to save rolled metal, cement, lumber and other types of resources will enable us to lower the net cost of construction-installation work by nearly 11 billion rubles in the 11th Five-Year Plan.

Much organizational work and considerable effort will be required to successfully resolve the tasks set us. The USSR Gossnab is obligated, as is anticipated by the CPSU Central Committee and USSR Council of Ministers decree on strengthening economy procedures, to ensure strict state monitoring of the efficient, economical expenditure of material resources in the national economy, the introduction of progressive expenditure norms, and implementing measures to prevent mismanagement in the storage and use of raw and other materials, fuel and equipment.

It is the duty of each worker in our system to use all his knowledge, abilities and energy to resolve the large tasks set by the 26th CPSU Congress.

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RESEARCH, PLANNING INSTITUTES STRESS ECONOMY

Moscow BETON I ZHELEZOBETON in Russian No 11, Nov 81 (signed to press 12 Oct 81) p 2

[Article: "Introduce Economic Projects and Developments More Widely"]

[Text] One of the most important tasks set by the 26th CPSU Congress is the efficient expenditure of resources, following a strict economy routine and a resolute struggle against mismanagement and extravagance. This five-year plan, we are faced with providing the national economy with a savings of 160-170 million tons of conventional fuel, and in the construction branch, with a savings of 7-9 percent in basic materials such as rolled ferrous metals and lumber and 5-7 percent in cement.

In May of this year, the CPSU Central Committee adopted a decree "On the Initiative of Collectives of a Number of Enterprises of Moscow on Extensive Use of the Achievements of Science and Engineering With a View Towards Ensuring a Savings of Labor, Material and Energy Resources." It notes that, governed by the instructions of Comrade L. I. Brezhnev, CPSU Central Committee General Secretary, on the necessity of achieving high end results with the least expenditures, collectives of a number of Moscow enterprises have come forward with an initiative to develop a movement for the extensive introduction into production of scientific and technical achievements permitting a maximum savings of all types of resources. Moscow scientists have obligated themselves to transmit to the national economy the results of about 6,000 research and development projects with an anticipated national economic impact of more than two billion rubles. Under creative cooperation agreements, institute collectives will render nearly a thousand Moscow enterprises scientific and technical help.

It was noted at a joint meeting of the USSR Gosstroy collegium and the central committee presidium of the construction and building materials industry workers trade union held in June that scientific research institutes of the USSR Gosstroy system have actively taken up the task of introducing scientific and technical achievements. The socialist obligations assumed for 1981 by the collectives of these institutes anticipate completing fulfillment of the scientific research plan ahead of schedule, by 20-28 December, ensuring an economic impact of more than 350 million rubles to the national economy.

The collectives of TsNIIproyektstal'konstruktsiya [Central Scientific Research and Planning Institute of Structural Metal Parts], Ukrproyektstal'konstruktsiya, and Soyuzmetallostroyniiproyekt association's Dneproproyektstal'konstruktsiya have obligated themselves to achieve a savings of 290,000 tons of metal in construction during the 11th Five-Year Plan (as against the 1980 savings level) through the use of high-strength steels, economical shapes and other progressive resolutions. The NIIZhB

[Scientific Research Institute of Concrete and Reinforced Concrete] collective assumed a socialist obligation to ensure a savings in metal of 150,000 tons above the plan during the 11th Five-Year Plan thanks to the development and introduction of new components and effective types of reinforcement steels into construction.

In response to the CPSU Central Committee and USSR Council of Ministers Decree "On Intensifying Work To Save and Make Efficient Use of Raw Material, Fuel, Energy and Other Material Resources," the collective of the All-Union Planning-Surveying and Scientific Research Institute imeni S. Ya. Zhuk (Gidroproyekt) has appealed to the collectives of planning, scientific research and design organizations of all branches of the national economy to compete to create highly economical plans which meet the modern demands of scientific and technical progress, which ensure increased capital investment effectiveness, lower project cost and the efficient use of raw and other materials, fuel, energy and labor resources. The CPSU Central Committee has approved this initiative and has expressed its confidence that its development will permit a substantial contribution to the nationwide movement to strengthen at attitude of thrift.

The collective of the NIIOSP [Scientific Research Institute of Foundations and Underground Structures] imeni N. M. Gersevanov has called on related organizations to render planning and construction organizations all possible assistance in introducing progressive scientific-technical developments at agricultural projects in order to solve the food program in the 11th Five-Year Plan. This call has been approved by the central board of the scientific and technical society of the construction industry.

Responding warmly to the appeal of the Gidroproyekt collective, the CPSU Central Committee decree "On the Initiative of the Gidroproyekt Institute imeni S. Ya. Zhuk Collective to Raise the Scientific-Technical Level of Plans and, on That Basis, Lower the Estimated Cost of Construction and Save Labor and Material Resources" and the call by the NIIOSP imeni N. M. Gersevanov collective, a number of lead institutes of the USSR Gosstroy system have assumed additional socialist obligations on meeting ahead of schedule the assignments of the first year and the 11th Five-Year Plan as a whole.

The NIIZhB collective has obligated itself to carry out the plan for scientific research aimed at resolving tasks in the area of rural construction at a high level and ahead of schedule, by 19 December, and to complete eight above-plan projects, render at least 30 production and planning organizations of the USSR Ministry of Rural Construction system scientific and technical assistance, and conclude at least 10 creative cooperation agreements with leading production associations and ministries concerned with rural construction. Of the total above-plan savings in steel, 30,000 tons, the obligations at rural construction enterprises anticipate ensuring a savings of at least 5,000 tons. A number of other specific obligations have also been taken on.

The NIISK collective, having concluded 45 creative cooperation agreements with many construction ministries and departments, has assumed increased obligations for the 11th Five-Year Plan on attaining a national economic impact of at least 200 million rubles from the introduction of institute developments into construction, including 175 million rubles through the introduction of components developed by the institute.

This impact is to be obtained by reducing concrete expenditure by 220,000 m^3, reducing expenditures of cement and steel by 220,000 and 50,000 tons, respectively, and by a significant savings in labor expenditures.

The additional 1981 obligations aimed at saving various types of material and labor resources, as well as reducing the cost of planned projects, including agricultural ones, were adopted by collectives of the TsNIISK [Central Scientific Research Institute of Construction Components] imeni Kucherenko, NIISF [Scientific Research Institute of Construction Physics], TsNIIOMTP [Central Scientific Research Institute for the Organization and Mechanization of and for Technical Assistance to Construction] and others.

On the threshold of the nationwide celebration of the 64th anniversary of Great October, the collectives of scientific research and planning construction organizations are persistently augmenting their efforts in order to successfully complete plan assignments and carry out with honor the socialist obligations assumed on ensuring savings in material and labor resources.

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BUILDING MATERIALS

NEW REINFORCED CONCRETE COLUMN DESIGN SUCCESSFUL

Moscow MOSKOVSKAYA PRAVDA in Russian 13 Sep 81 p 2

[Article by O. Voyakina: "A Million In Advance"]

[Text] The CPSU Central Committee Decree "On the Initiative of Collectives of A Number of Moscow Enterprises to Use Extensively the Achievements of Science and Engineering to Ensure Savings in Labor, Material and Energy Resources" notes that the goal of the new initiative is to achieve good end results with the least expenditures.

This path was taken long ago at the Glavmospromstroymaterialov's No 18 reinforced concrete products plant. One new development here is greatly different from all its predecessors. Its economic impact will be a million rubles. The proposal will enable us to manufacture unitized-frame prefabricated columns based on a frame in the unified Moscow catalog for multistory houses, and metal expenditure will be 1.5-fold lower than previously.

This is a great victory and the path to it was laid out long ago. The columns, which support a load of up to 600 tons for buildings up to 16 stories high, were developed in the early 1960's. We needed to increase the bearing capacity of the columns in order to build multistory buildings. Inasmuch as the technical resolution for such columns using ordinary reinforcing was lacking at that time, we first produced them with a metal core, but that entailed using large amounts of metal.

Various scientific research and planning organizations took up the search for an optimum resolution. Plant specialists, the All-Union Scientific Research of Factory Technology for Prefabricated Reinforced Concrete Components and Items, administrations Nos 1 and 2 of the "Mosproyekt" and the Glavmospromstroymaterialov scientific research laboratory combined efforts on this. And a way out was found. A column of standard section with 16 milled reinforcing rods and steel end plates turned out to be capable of supporting a load of 900-1,000 tons.

"Mosproyekt" No 2 administration chief designer A. Kondrat'yev says: "Development of the new type of column finally provided a solution to the problem we in Moscow had been looking at for many years, for as long as we had been building buildings using standard-frame elements. Metal-core columns were not the way out. The cores were not manufactured in Moscow and required constant organizational and transport outlays, not to mention steel expenditures. Moscow designers sought to replace the metal-intensive columns with ordinary reinforced ones of larger section. However, this signified a sharp increase in the products list of all frame elements associated with the columns and, correspondingly, in the stock of metal shapes. But the new column eliminated these shortcomings."

We will not go into the details of the new component, but will only note one primary thing, that about one ton of metal is saved per column. During the year, the No 18 reinforced concrete products plant has already saved 3,700 tons of this valuable material. Moreover, the proposed columns do not differ in size from previous ones, meaning no substantial changes in building designs are being proposed.

As concerns production, the new resolution is very profitable for the plant. Previously, 180 metal shapes would have had to be manufactured to utilize the entire products list of columns. Today, the plant can make do with the minimum, 13. The metal plates secured to the reinforcing are at the same time both the end elements and the butt sides of the form. Hence, a double reduction in expenditures of heavy physical labor in the shop: the form butt sides previously had to be covered and uncovered by hand.

True, there is more work for the reinforcing shop: whereas metallurgical enterprises previously supplied finished cores, now all the column "stuffing" is prepared at the plant, which had to develop and introduce special technology to achieve high frame assembly precision.

Builders are also aware of the pluses of the innovation. The opinion of V. Zachesov, construction sector chief at the intercity automatic telephone exchange on Sushchevskiy Levee: "Our construction site was one of the first in Moscow to use the new type of standard-frame columns. Previously, installing a component with a concrete joint required 11 operations, some of which were associated with wet and manual processes and others with complex welding and the use of specialized equipment and technology. But the flat metal joint introduced by plant No 18 requires only welding. The considerable simplification of the job has permitted a significant improvement in quality and faster installation."

This high evaluation is also supported by D. Gordon, chief engineer of "Mosstroy" trust No 16: "At first, we were suspicious of the new components, inasmuch as a flat metal joint is much like the joint in columns with a metal core, which caused us much grief. However, it turned out that the precision of manufacture of the columns has met the most exacting demands. Labor intensiveness when joining columns has been reduced, we estimate, by three-fold."

The little bit of experience thus far available in using the columns, in building the Sushchevskiy Levee automatic telephone exchange and the international bank complex on Novo-Kirovskiy Prospekt, has shown that the new columns also mean new and more productive methods of labor and a higher level of construction industrialization.

Specialists estimate the economic impact to be a million rubles, and that only an advance. Given the expanded production of these columns and their use in other cities besides the capital, the impact will doubtless grow. Moreover, the new principle opens up the road to further discoveries. The plant collective, jointly with scientists of the All-Union Scientific Research Institute of Plant Technology of Prefabricated Reinforced Concrete Components and Items, Glavmospromstroymaterialov scientific research laboratory and "Mosproyekt" administration No 1, is now working on developing a column with a bearing capacity of 1,200 tons and using Class-V heat-tempered steel. Resolution of this task will enable us to put up fully-prefabricated frame-panel buildings more than 25 stories high in Moscow.

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CRITICIZED CONSTRUCTION MACHINERY PRODUCTION ADMINISTRATORS PUNISHED

Moscow EKONOMICHESKAYA GAZETA in Russian No 44, Oct 81 p 7

[Article by Deputy Minister of Construction, Road and Municipal Machine Building A. Piskarev: "Price Discipline"]

[Text] The Ministry of Construction, Road and Municipal Machine Building has reviewed materials on cases of price discipline violation revealed by the State Price Committee (see EKONOMICHESKAYA GAZETA, No 28, 1981).

The ministry collegium has removed from his post Comrade Bondarenko, general director of Tol'yatti Production Association for Producing Technological Equipment, for violations of state price discipline and other abuses permitted by him.

Comrade Tkachenko, chief of the All-Union "Soyuzstroymashavtomatizatsiya" Association, has been severely reprimanded for failure to ensure proper supervision of the economic activity of that association.

With a view towards ensuring correctness of established wholesale prices, the ministry has ordered an additional check of the reliability of data on excluding the cost of disassembled subassemblies and parts from base tractors.

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METALWORKING EQUIPMENT

PROBLEMS IN MACHINE TOOL INDUSTRY DISCUSSED

Commission Discusses Labor Productivity

Moscow Izvestiya in Russian 21 Aug 81 p 2

[Article by V. Mussalitin: "Problems of Machinebuilding"]

[Text] Labor productivity, noted V. I. Lenin, is, in the final analysis, the most important, the principal ingredient for the victory of the new social order. It was just this labor productivity, for the most part, which was considered when the industrial leaders of our first five-year plans built and consolidated power. The party regards questions on the growth of labor productivity to be of paramount importance now when our country has advanced a long way along the path of technical progress, when the productive forces of society have achieved a qualitatively new level and, when thanks to the scientific and technical revolution, the lock of many plants and entire industries has been substantially changed.

The regular joint meeting of the industrial commissions of the Soviet of the Union and the Soviet of Nationalities of the Supreme Soviet of the USSR, which met on 18 August in the Kremlin, was devoted to the work of Minstankoprom [Ministry of the Machine Tool and Tool Building Industry] USSR and Mintyazhmash [Ministry of Heavy and Transport Machine Building] USSR on fulfilling the tasks involved in creating the conditions for increasing labor productivity in industry.

The chairmen of the commissions conducted the meeting--the First Secretary of the Central Committee of the Communist Party of Estonia K. G. Vayno and the First Secretary of the Checheno-Ingushskiy CPSU obkom A. V. Vlasov.

The chairman of the Joint Deputy Preparatory Commission, First Deputy Chairman of Gosplan USSR N. I. Ryzhkov, the Minister of Minstankoprom USSR B. V. Bal'mont, and the Minister of Mintyazhmash USSR V. F. Zhigalin gave reports.

The ministries that presented accounts to the deputies of the highest organ of state power in the country were not chosen by accident. It is a known fact that machine building plays the main role in resolving the tasks of the technical retooling of the national economy and in placing it on an intensive path of development. "Machine building, that advanced thing which scientific and engineering thought creates, has been urged without delay to develop and bring to reality highly-efficient, reliable machines, instruments, and operational lines," comrade L. I. Brezhnev said at the 26th CPSU Congress. This imposes a special responsibility on the machine builders.

Minstankoprom and Mintyazhmash, as the meeting noted, have worked hard on developing their industries. During the past 20 years the production volume of Minstankoprom increased 6.4 times while Mintyazhmash grew by more than three times during the same period.

It was said at the meeting that successes in developing the industries of the national economy, primarily machine building and metal working, are determined, to a significant degree, by the condition of the tool building base. Many machine tools and equipment with digital programming control were produced during the 10th Five-Year Plan. In the past five years the manufacture of this equipment was double the figure for the 9th Five-Year Plan. Minstankoprom, on the whole, fulfilled the tasks of the five-year plan for the creation and introduction of new types of industrial products. New machine tools and transfer lines have reached plant shops.

Highly productive rolling mills, installations for continuous steel teeming, the latest pipe mills, containers for transport shipments, new highly productive equipment for underground ore extraction--all of this is the calling card of Mintyazhmash. Plans call for the intensive development of these industries in the 11th Five-Year Plan.

In comparing what both industries did with the tasks set by the 26th Party Congress on the further improvement of industrial production, the deputies stated: the work level of Minstankoprom and Mintyazhmash does not yet fully satisfy the modern stage of development of the domestic economy.

The ministries, the meeting stated, have permitted a lag in the growth of the industries entrusted to them. This, in turn, has hampered the work of the subcontractors. Enterprises as usual have an acute need for many types of machines, equipment and mechanisms which these ministries produce.

After carefully familiarizing themselves with the documents coming into the commission, and studying in depth the situation in the leading industries of the national economy, the deputies were unanimous in their opinion--the causes of the serious shortcomings should be sought in the weak utilization of available reserves. The time periods for assimilating new equipment and introducing progressive technology into production are too great. Methods for strengthening the scientific research and experimental design base are being slowly implemented in these ministries.

The deputies noted that a cause for special alarm is the fact that very recently the technical level and quality of some types of manufactured machinery and equipment still did not answer today's requirements. Their reliability, durability, and productivity are still low. A reliable lock has not yet been placed on the output of obsolete equipment.

The deputies believe that the technical level of the manufactured machinery and equipment is not high enough--a consequence of weak control by the appropriate state organs.

The meeting noted that now when the party is turning decisively toward intensive methods of economic management and toward an increase in the efficiency and quality of all of our work, questions on improving control and verifying execution become of paramount importance. The tasks put forward in the recently adopted party Central Committee decree "Further Improvement of Control and Verification of Execution in Light of the Decisions of the 26th CPSU Congress" are of fundamental importance to party, Soviet, and economic organizations in improving their daily work and increasing responsibility for the work entrusted to them.

The deputies emphasized that while the scientific and technical revolution is boldly invading plant shops and many hundreds of shops in the country have automatic industrial devices, manual labor proceeds along at the same time with intelligent modern machines. The ministries must stake things first of all on the output of sufficiently efficient electrical machines, equipment, mechanisms, and automatic machinery which would allow the total mechanization and automation of many production processes.

The speeches of the deputies R. S. Bobovikov, V. K. Akulintsev, A. P. Filatov, V. A. Masol, P. M. Noreyka paid a great deal of attention to questions of concentration, specialization and cooperation.

The deputies stated that the consistent implementation of the party policy of concentrating production in industries is already yielding tangible results. The number of control projects has noticeably decreased and the organizational structure of production is improving. However, Minstankoprom and Mintyazhmash are not fully utilizing at present the advantages of the new control structure. Some production associations have been formed here by the mechanical amalgamation of plants without considering the economic effectiveness of their creation and their growth prospects.

Formalism is the enemy of everything that is good. It is precisely the formal approach to the organization of associations and the poor work on deepening specialization and cooperation that has caused the labor productivity growth rate and the other technical and economic indicators of a majority of Minstankoprom associations to be lower than at enterprises which did not join the association.

It is known that intersectorial specialization and the development of independent industries for the centralized production of part stampings and assemblies for common use in all kinds of machines manufactured by various industries has a great economic impact. However, departmental barriers prevent the development of intersectorial specialization. The majority of machine building plants continue to be total, as it were, "universal" enterprises where, besides shops outputting basic products, they operate casting and forge shops, and shops and sectors for manufacturing tools and industrial equipment which are poor and technically backward.

This is an obviously abnormal phenomenon. It contradicts state economic interests, leads to machine building production price rises, and lowers labor productivity growth.

One would think that Minstankoprom, of all organizations, would be called upon to coordinate the work of developing intersectorial specialization. However, the ministry itself also suffers from a departmental approach to business. An example of this was given. An industrial center is being built in Armenia. Among the plants being built here there are two casting plants, 200 meters from each other. One of them, which is undergoing reconstruction, is under the authority of Minstankoprom, while the second, which was built recently, belongs to Minavtoprom [Ministry of the Automotive Industry]. From the point of view of concentration and intersectorial specialization, it is economically advantageous to have one plant of greater capacity rather than two separate ones. However, the two ministries have not yet reached an agreement on this.

The meeting stressed that Minstankoprom and Mintyazhmash, because of their special position in the system of organizing industrial production, must assist, to the maximum extent, the growth of labor productivity in industry, yet they themselves have decreased the labor productivity growth rate at subordinate enterprises. It is obvious that at the enterprises of these ministries discipline has been weakened and the responsibility for the absolute fulfillment of the planned tasks has been lowered. The meeting listed examples of mismanagement in organizing production and weak control over carrying out their own decisions.

It was stated at the meeting that the formation of stable collectives providing workers with housing, kindergartens and nurseries, and the organization of public eating establishments are of great importance in fulfilling the planned tasks for the growth of labor productivity. However, Minstankoprom and Mintyazhmash are still not concerned enough about improving the living conditions of the workers. The planned tasks for the construction of housing, pre-school facilities, and other social welfare projects are not being carried out here annually.

The commissions mapped out concrete recommendations to correct the shortcomings which surfaced during the preparations for the meeting and in the reports and discussions which were heard at it.

Candidate member of the Politbureau of the CC CPSU, First Deputy Chairman of the Presidium of the Supreme Soviet of the USSR V. V. Kuznetsov, Deputy Chairman of the Presidium of the Supreme Soviet of the USSR P. G. Gilashvili, Chairman of the Soviet of the Union of the USSR Supreme Soviet A. P. Shitikov, USSR ministers P. F. Lomako, A. I. Mayorets, V. N. Polyakov and M. S. Shkabardnya participated in the meeting.

Ivanovo Machine Tool Initiative

Moscow SOVETSKAYA ROSSIYA in Russian 13 Sep 81 p 2

[Article by L. Gladysheva and V. Shilov: "An Initiative Outside the Plan"]

[Text] The telephones rang constantly. It seemed that all of the problems which had accumulated during the month had to be immediately solved on the very first working day after vacation. Moscow, Stockholm, Hanover, Helsinki, Moscow again...

"Yes, yes," Kabaidze shouted energetically into the phone. "The machine tool was sent to the exhibition at Hanover. We are preparing contracts for Sweden and Finland. Difficulties? There are--with debugging the brains. What kind of brains? Electronic, of course."

All of the calls were important, concerning urgent business. However, the most important and most urgent call which Vladimir Pavlovich had been awaiting impatiently for several months did not come at this time.

As long ago as the spring the general director of the Ivanovo association V. P. Kabaidze sent a production program plan for the 11th Five-Year Plan to Minstankoprom. Taking into account the interests of the national economy and world market conditions, it proposed to increase by several times the manufacture of heavy multi-operational centers and machine tools with digital programming control and, in return, to sharply decrease the output of traditional products. An order of the minister must be issued on the results of an examination of the plan. Months passed and the ministry was silent. The chief of the all-union association Soyuztyazhstankoprom[All-Union Association of the Heavy Machine Tool Industry] V. N. Pokasyuk gave assurances:

"There will be, there will be an order for you."

The deadline for shaping the plan had already expired and a clear answer had not come from the ministry. The spirit of the general director became all the more troubled. Will the Ivanovo initiative really turn out to be outside of the plan again and will a difficult fate again await the self-starting enthusiasts?

This started in 1975. After returning from a machine tool exhibition in Paris, Vladimir Pavlovich Kabaidze gathered his "brain center" together and resolutely announced:

"We have wasted enough of our country's money on the purchase of heavy machine tools. We ourselves will make tooling centers!"

Each competent person more or less theoretically imagines such a scientific and technical revolution. But how does this work out in practice when applied to a specific enterprise? It appears that what happened in the shops of the Ivanovo Machine Tool Association during several months of 1976 can justly be called a technical revolution within the framework of one plant. Events moved ata rapid pace--the planning of the tooling center began on 4 January, the first blueprints were issued on 15 April, and the first frame castings were ready on 30 April.

Perhaps only specialists can fully assess the total impact of the technical feat accomplished by the machine tool builders. What is a "tooling center?" The definition is still not in the new technical dictionary. It is a huge machine capable of immediately tooling in several dimensions parts the size of an average one-story building. At the same time the number of technological operations has been decreased 30-50 times, and the productivity is increasing up to 20 times. The giant machine tool has been equipped with electronic control. More simply stated, in its user qualities the tooling center differs from an ordinary universal metal-cutting machine tool just as, let us say, a color television set differs from a black and white one.

Kabaidze very nervously accompanied his creation to the world machine tool building exhibit in Hanover. The first Soviet tooling center caused a sensation in western business circles. The monopolistic firms were greatly dismayed when the well-known West German firm Bosch, which called in a rush, bought the Ivanovo machine, thereby confirming its high competitiveness on the world market. Vladimir Pavlovich returned home with a "shield" and broad technical schemes. With all of the same selflessness, the brain center created new, more modern tooling centers. The demand for them has grown and foreign visitors constantly come to Ivanovo. The general director told us about a group of businessmen he recently brought to the shop. They acted importantly and even somewhat arrogantly--they said that it was difficult to surprise them. However, self-control left the guests as soon as they saw the latest, not fully assembled, model. After alertly probing it with his eyes, the grey-haired Frenchman estimated: a million!"

Thanks to the efforts of the collective of Ivanovo machine tool builders, the country has obtained equipment which is extremely necessary in heavy machine building sectors. More than 100 tooling centers permitting us to save more than 20 million rubles of national assets have been manufactured in Ivanovo over several years. The importation of such machines confirms our prestige on the world market and provides hard currency. "Your patriotic initiative," comrade L. I. Brezhnev wrote to the Ivanovo machine tool builders, "and continuous search for new ways to solve the most complex tasks of technical progress evoke a sense of pride in the Soviet working class, engineers, technicians, and production organizers."

The radical renovation of the means of production is called a scientific and technical revolution because it forces its way in the difficult struggle with the old, usual, clear, and comfortable. Such are the dialectics of life. The "technical revolutionaries" ought to know this beforehand--the path chosen by them is steep and thorny and requires a strong physical and, above all, moral hardening. You can't separate the words from the song: there was an instant when V.P. Kabaidze almost gave up.

Inspired with this first international success, the general director was full of cheerful hopes. He reasoned in roughly this way--"Our tooling centers are necessary and profitable to the state. We must stop the production of old machine tools and make the more splendid new ones." The irresistibility of the arguments appeared obvious. Kabaidze sent his views without delay to the ministry. An important circumstance prompted him to hurry. The production of tooling centers developed to the detriment of a planned products list. But there is neither a plan nor a progressive piece-rate system of wages. He hoped that the ministry would make the necessary corrections and everything would fall into place. However, the ministry did not rush to meet the Ivanovo "technical revolutionaries" half-way. The messages of Kabaidze remained unanswered and the collective was without bonus funds.

The discouraged general director turned to the oblast party committee for help. Yet another weighty and well-reasoned letter went to Minstankoprom. The first obkom secretary V. G. Klyuyev signed it. It was impossible to remain silent and the minister had to take up the pen at that time. The answer put together for them is a model of bureaucratic diplomacy. Highly praising the scientific and technical diligence of the Ivanovo innovators, the minister, as if by the way, notes that, in spite of all that, the enterprise still has sufficient unused reserves which it ought to use to fulfill the state plan. A honey coating did not sweeten the poisonous bitter taste of the ministerial pill. Kabaidze got the picture clearly--there was no hope of help from the ministry. Vladimir Pavlovich recalled that one of the managers of the industry, when examining machine tools with digital programming control at the USSR VDNKh [Exhibition of USSR National Economic Achievements], noted scornfully:

"Stylish things. However, style is changeable. It hardly pays to keep up with it."

A deputy minister said this, being sure that no one of those accompanying him would dare to object. And no one did object. However, they apparently took the point of view of a responsible comrade. Is this not the reason why Kabaidze did not receive backing for his project at the industry's headquarters? The situation then appeared irreparable to Vladimir Pavlovich--all of his plans and schemes had caved in. He could no longer work in the old way. In a bitter moment of despair he wrote: "I request to be released from my job."

Vladimir Grogor'yevich Klyuyev invited Kabaidze in for a talk. Neither one of them wanted to tell us about the contents of their conversation. Apparently it was difficult for both of them. One can surmise that the first secretary of the oblast party committee succeeded in giving the communist director such a lesson in dialectics that even now he is still not comfortable with the faintheartedness he displayed three years ago. No, it did not become easier for Kabaidze, but he still would not go away. The technical revolution is an irreversible process. The ranks of the allies of the innovators are increasing and getting stronger, and the bridgehead for their positions is widening. Through the help of V. G. Klyuyev, meetings took place in the machine tool building association with administrators of the USSR Academy of Sciences and several machine building industries where tooling centers are very necessary. The Ivanovo people succeeded in placing orders for very scarce complete units, equipment, and outfittings. The production capacity of the shops has grown. All of this will now permit the manufacture of more than 130 of the latest machines.

The technical revolution in the Ivanovo Machine Tool Building Association has borne wonderful fruit for the national economy. The economic gain is numbered in the tens of millions of rubles. However, the business is moving with difficulty, slowly, painfully. While organizing the output of the newest articles, the collective cannot fulfill the tasks for the entire products list and for commodity production volume. For this reason the Ivanovo people have lost about two million rubles in economic incentive money. On the average each engineering and technical employee has lost 1,800 bonus rubles over the five years. The enterprise chronically lacks the means for the upkeep of Young Pioneer camps, rest facilities, and for vacation payments. Housing construction is lagging. The waiting list for apartments has grown to almost 600 persons. People, of course, will not start to devote all of their energies to production when they do not sense a mutual concern for their day-to-day living problems. An enthusiasm not strengthened by a material stimulus cannot exist for long. In five years there was almost a 50 percent turnover in the "officer corps" of the association. The main reasons for the departures were dissatisfaction with earnings and the hopelessness of obtaining housing.

The essential question is how could Minstankoprom allow a collective which, through innovation, has brought enormous benefit to the state, to be placed in an extraordinarily critical social and economic position? Is the real truth that initiative is punishable!

According to the state plan the Ivanovo association in five years had to increase the output of products by 51 percent and the growth was actually 47.7 percent. Where was the 3.3 percent lost? The arithmetic here is not complicated. In the production of old machine tools each norm-hour worked brings about 12 rubles into the plan, whereas the manufacture of tooling centers brings only eight rubles. This means that the more the enterprise produces tooling centers the lower its monetary production volume will be. What is the solution? It is necessary either to revise the wholesale price of a new article or decrease the planned task for the enterprise. It is difficult to do either--in the first place the industry growth rate has already been approved and, secondly, all of the machine tools set down in the plan have been alloted to customers.

So an indefatigible director like Kabaidze undertakes, on his own initiative, a technical revolution which was not envisaged by the ministry and, of course, was not included in the plans. Why should the documentation put together through painstaking work be smashed to pieces to satisfy his whim? Go to Gosplan and Gossnab with suggestions--say that you have created such unusual machines in Ivanovo that it is impossible to fit them everywhere and to exclude the small machine tools which have been ordered from funds. They will not start to talk. On the whole they have placed considerations of dressed-up ethics above business interests.

Vladimir Pavlovich Kabaidze did not want to admit such logic. He knocked on all the office doors and he was finally heard. On the instructions of the chairman of the USSR People's Control Committee a representative commission consisting of responsible employees of Gosplan USSR, Goskomtrud USSR, the Ussr State Committee for Science and Technology, USSR Goskomtsen, and Minstankoprom went to Ivanovo. Their opinion was simple: "Kabaidze is fighting for the right thing and we must help him." This constructive position was stated in a protocol of 25 May 1979 and confirmed by signatures. The signature of the deputy minister of Minstankoprom A. Ye. Prokopovich is among them. Apparently he felt uncomfortable under the reproachful stares of the commission members, and that is why he very much wanted to prove that he was in favor of technical progress. The deputy minister was not stingy with his promises:"the ministry is quickly solving the problem of increasing material stimulation funds. It will clear the way for the tooling centers by handing over the manufacture of a part of the machine tools to other plants. It will allot additional assets to the Ivanovo people for re-tooloing production." The promises of the industry director echoed persuasively on his lips and were accepted. Arkadiy Yefimovich did not keep his word.

At the beginning of this year the "green light" came on again on the road of the Ivanovo machine tool builders. The new minister I. S. Silayev worked for a long time in aviation construction. He looked at events through the eyes of a customer and the state perspective on the work which had been started became immediately clear to him. Visiting on site, the minister fully approved of and supported the scale of V. P. Kabaidze's ideas. At the directive of I. S. Silayev a "Plan of Measures to Improve the Work of the Ivanovo Machine Tool Building Production Association"was put together. In a half year groups of specialists headed by the deputy ministers V. M. Voyevodin, A. Ye. Prokopovich and N. I. Sergeyev had to develop a broad program to convert the enterprise into a large-scale scientific production association specializing in the manufacture of machine tool units of special importance to heavy machine building. It seemed that the dream of Vladimir Pavlovich Kabaidze had come true. However, it turned out that the minister, because of state interests, had to head another ministry.

However, you see, other characters remained in their posts. What did they undertake? The chief of Soyuztyazhstankoprom V. N. Pokasyuk, whom we met in this report, took offense:

"It turns out that we are on a different shore than Kabaidze. He is, he says, a pioneer and innovator and we, workers of the ministry, are only for things which will put a spoke in his wheel. This is a fundamentally incorrect emphasis. Without our help the Ivanovo people could not have achieved such significant results."

The ministry managers really never and nowhere came out against the initiative of the Ivanovo machine tool builders. However, their help unfortunately was only enough to prevent them for being reproached for conservatism.

Along with V. N. Pokasyuk we are looking through the documents approved by the leaders of the industry. The time limits, specified in them, expired a long time ago.

"We will do this and this also will be done. It is necessary to investigate here. We will look into it here," our collaborator promises.

And he concludes quite buoyantly:

"The proposals of the Ivanovo people will be accepted!"

But when?

We telephoned the minister. After learning about the subject of the conversation about to take place, Boris Vladimirovich Bal'mont shunned a meeting.

"I am aware, well aware of the Ivanovo troubles. I have even related them in the Council of Ministers. However, I do not want to talk with you about them at the present time. We are looking into it, we are mapping out a plan of action, then come."

"But there is already a program of measures. It was approved by the ministry as long ago as February."

"Really," the minister was amazed. "I have not seen this document."

It really was not the time to talk about that at present.

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